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OF

PSYCHOLOGY

BY

DANIEL GREENLEAF THOMPSON

IN TWO VOLUMES

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PART VI.—*continued.*

THE GENERAL DEVELOPMENT OF STATES OF CONSCIOUSNESS

CHAPTER XLVI.

VOLITIONAL DEVELOPMENT.

§ 1. THE development of volition in the individual consists in the development of the selective power to choose and steadily pursue ends, and in the formation of habits according to the selections made. It accomplishes a greater or less control of feelings, thoughts, and actions by means of, and in obedience to ends. An end is more than a motive. A motive is that which moves mental energy, considered merely as the cause which sets in motion; an end is that which is expected to satisfy energy. Ends are pleasures represented. Pains are motives, but never ends.

§ 2. Of the exercise of the dynamic element in volition we have no consciousness, when it is unchecked and unimpeded. We are conscious of antecedents and of consequents, but of the movement of the power itself we know nothing intuitively. And yet this power lies at the foundation of mental existence. Thus the unconscious is the basis for the conscious. But as there is hindrance and opposition in the action of automatic power, there arise delay, selection, and the various forms of volitional consciousness.

§ 3. We reduced all automatic activity to the two heads, Redintegration and Efferent Activity (Chap. XXXII. § 36). The latter of these may be exercised without consciousness; and indeed, in the genesis of mind, existed before consciousness. The former process may also go on without consciousness, but it likewise exhibits the sphere of conscious activity. Within the course of redintegration lies the development of selective volition, and the exercise of this selective power gives a greater or less degree of control both over redintegration itself and efferent activity.

§ 4. How is this control accomplished? I have already said by ends, that is, represented pleasures. On the intellectual side, then is required construction. Representation brings up certain objects which involve static or dynamic power, contemplation, or action, and these are projected into the future, as capable of realisation and as desirable. Thought and action follow to realise; but hindrances arise from habit which may be either habits of redintegration or habits of efferent activity. Out of the interferences thus resulting arise all the phases of volitional consciousness. Let us briefly trace the course of acquiring volitional control, following here the admirable course of exposition of Professor Bain.

DIRECT ENDS FROM MOVEMENT AND SENSATION.

§ 5. Where any given movements produce immediate pleasure or pain, an increase of the movement giving pleasure and the abatement giving pain, or the converse, we have the simplest case of active determination of the mind. If exercise gives rise to delight, there is a volition to continue it; when fatigue comes, there is an abatement of the exercise. A connection is thus readily established between pleasure and movement or rest. In cases where the requisite movement for alleviating a state of pain is not directly touched upon, a series of tentatives must be and is gone through with until fortuitously an accord is reached. A few repetitions of this fortuitous accord cement a firm association between the idea of the given pleasure and the movement required to produce it. A great many of our earliest volitional tendencies, away from pain and toward pleasure, take their rise in the experience attained by uncertain, blind movements in obedience to the law of pleasure and pain.

§ 6. This is seen in all sensations. The education of a child to dread the fire is a pointed example. When a burn is experienced, pain is felt, and a movement is produced which is not intelligent; it may be toward the fire, as well as away from it; but, if there be a repetition of the burn, a more energetic movement is made, and in the course of the movements a direction away from the cause of the pain is likely to be followed. When, sooner or later, the body is moved away from the fire, a feeling of grateful relief creates a satisfaction and forges a link of association between the relief and the means for attaining it. The same process occurs within the whole range of our early acute pains; when once it is started, its progress is very rapid. The situation of uneducated volition occurring in mature life is often seen when, cramps in the leg attacking a person, he has no suggestion of alleviating movements; there is no association established which brings volitions which procure immediate relief. All that can be done is to try till a happy means is touched upon.

§ 7. Following organic sensations still farther, it may be noted how voluntary control arises gradually in connection with movements for alleviating thirst and hunger. Infants at first cannot drink liquid from a cup or other receptacle; no more can they eat; but the process of mastication is learned at a much later stage than that of drinking. Sucking is the earliest act connected with taking aliment. This is a reflex instinctive action; but leaving off sucking when the hunger is relieved is a purely selective activity. The graduation of the force of the act before cessation is also selective. It is difficult to determine exactly where in sucking the reflex ends and the voluntary begins; probably the first purely voluntary movement is the effort to withdraw energy from the act. Though the infant is able to suck from the beginning, it is not able to find the nipple, and a very appreciable process has to be gone through in order to learn the connections necessary to direct the infant in its motions to reach the breast. Mastication is acquired without great difficulty. The tongue is a member which is amenable to very free movements, and the process of adaptation to the morsel in the mouth is readily learned. The relish and taste are quickly associated with the movements necessary to sustain them. From spontaneous undirected movement controlled associated movements are acquired by a series of trials and errors. The use of the jaw in mastication is acquired later, but exemplifies the same process. We have thus far been supposing the case of a pleasurable stimulus in the mouth. Where a bitter, unpleasant morsel is introduced, the infant does not know how to spit out its disagreeable food; the mouth is usually left a little open, and the child 'slobbers.' After a process of education, however, of the same sort, namely, tentative movements till the right one is hit upon, he learns to eject the unpalatable mouthful with decision and force. A similar method of acquiring voluntary control is observable in the offices of carrying waste matter from the system. Acquisitions of movements responsive to the feelings of heat and chilliness are gained by similar trials. The curling up of the body, the drawing close to a warm object, huddling, embracing, all, by repeated experiences, become associated means for relieving cold, and their opposites for protection against heat.

§ 8. In smelling, two acts must be conjoined; one, snuffing the air through the nose, and the other, closing the mouth. This presents a complication which delays acquirement. If the former alone were sufficient to generate the feeling which the organs of smell give, smelling would be one of the very earliest acquisitions; but the two must coincide, and quite a period of infantile existence may be passed over before a coincidence of these two actions occurs and smell is experienced. So of the expirations which relieve ill smells. But when once a coincidence is established its repetition is easier, and the permanent possession of the control of the organ is not far off.

§ 9. From the propensity to movement in all directions simply to relieve the pressure of accumulated central energy, the acquisitions of touch are very numerous and early. The associations of soft, warm contact, are probably the first; and to appreciate the pleasure of such contact implies an experience of its opposite, which is also soon obtained; control of the limbs and of the fingers follows in due time. The pains associated with touch as controlling voluntary action are illustrated in the discipline of the whip. If the punishment be inflicted so long as a wrong movement goes on, and ceases when that movement ceases, an established link is forged between a certain action and pleasure and another action and pain, and the will is directed toward the one and away from the other. There are, of course, different degrees of intensity, time, and repetition requisite to cement associations of this character so as to make a complete volitional determination; sometimes a single application is sufficient, sometimes many are insufficient. If the discipline is commenced too early it may fail from an inability on the part of the subject to preserve the requisite associations. At a later period it may fail, for the reason that the forbidden pleasure has a superior hold to the pains of punishment for indulgence in it.

§ 10. There is no especial voluntary control over the sensations, pleasures, and pains of hearing, which is acquired at an early age. The child must, perforce, hear, unless he is deaf. But as soon as he is able to run he can escape from disagreeable sounds and remain quiet under agreeable ones. Probably at a much later period the habit of stopping the ears to avoid unpleasant sounds is learned. But in early childhood the infant learns to keep still under the influence of agreeable sounds.

§ 11. The voluntary control of the eyes is closely connected with early movements. It arises in connection with experiences of light and darkness. The movements of the eyeballs, and of the head, following the light, indicate the association between the pleasure and the action. And movements of this character, once inaugurated, are rapidly propagated and extended. The adjustment of the eyes to distance is not wholly instinctive, but is acquired by the same process as other movements, in so far as it is not natural.

ASSOCIATED ENDS.

§ 12. The influence of intellectual association widens rapidly the range of volitions, modifies them, and gives them new directions. There are united in an early experience a pleasure, movements which sustain the same, and objects intellectually apprehended which are collateral and coeval. At subsequent times, then, the objects collateral are represented, and bring with them the feelings and volitions originally experienced. These objects, even, may be only accidentally connected with that which produces the given pleasure; yet an association of some sort of likenesses is established, by which the accidental stimulates the volition in like manner to what was originally essential. So, also, it operates to re-awaken and transfer feelings and volitions to something entirely distinct from, though similar to, that which originally evoked them. The whole process of the extension of volitions is thus explicable; and it is seen how all the volitions of ideal life are attained, and in what general way they are produced and producible. As the growth and extension of volitions proceed, it will next be proper to observe, the various immediate ends of action become only stepping-stones to others. The suggestion of an end suggests the various means for accomplishing the same; to these, as primary ends, volition addresses itself, but the principal or ultimate end is not lost sight of; and, as each intermediate step is gained, the impulse is strengthened to proceed beyond to the full fruition of the ultimate end. A chain of associated volitions is forged, in which the separate volitional links are closely bound to each other. Thus, by intellectual association, a process is established both of extension of volitions and of consolidation and comprehension. The multiplication of associations produces a multitude of motives, drawing volition in one direction and another, and at every step introducing new motives leading off in every avenue of divergence. These are continually pulling and pushing, aiding each other now and then, and anon opposing each other. Hence, the contradictions and oppositions of volitions which are all the time taking place. A study of the integration of associations has already disclosed how, when one direction is well established, the force of associated motives is so much greater upon that side as to prevent any other general direction being followed. A few illustrations of the processes of acquiring volitional obedience to representative cognitions may be now introduced.

WORD OF COMMAND.

§ 13. Obedience to the word of command is an acquisition in the same line as obedience to the whip, but introduces a higher degree of association. The education by which the sight of a whip will compel obedience is on the same plane as that now instanced. In either case, the sight or hearing calls up the pains of disobedience, and stimulates to action to avoid those pains. Probably harsh, shrill, sharp tones of the human voice are themselves painful, apart from any associated pain. So also the effect is enhanced by threatening looks. If the contrary effects are discerned when obedience is promptly and correctly rendered, the associating links are readily forged, and by subtle gradations in the voice of the one commanding the child is made very sensitive to conform his conduct to the exact wishes of his governor. If occasionally the original stimulus of punishment is applied, it will reinvigorate the force of subsequent indications of pleasure and displeasure by the voice. With some persons, such a repetition of the harsher stimulus is often required; with others, not at all, according to natural constitution. The first responses to vocal direction are very awkward and slow. The child does not know how to do as he is told; but gradually he finds out what is wanted, and, with the stimulus unabated, he works with facility. Even in mature life, the mind is wholly at a loss when a command is given to do an unaccustomed thing; and if the man has placed himself in a position to render obedience to command, he is perplexed and distressed. If, however, he were told to go thither or come hither, raise the arm or lower it, hold the head erect, eat or drink, walk or run, the frequency with which, in the course of his life, all these have been performed, enables him to respond unhesitatingly. To a child, however, all such acts are, in the first instances, as laboriously done as (and often more so than) the unexpected and unfamiliar injunctions imposed in adult life.

IMITATION.

§ 14. We have noticed that the earliest volitional efforts are of the nature of continuing or abating sucking when the hunger is satisfied. We have noticed next a power of selecting movements which bring pleasure or avoid pain, the selection being made through association. We then observed how the volition rested upon certain ends as intermediate, and made certain exercises subservient to more ultimate and remote purposes, as when the hands are moved to seize an object in order to convey it to the mouth. The discipline of the word of command marks a further step in volitional association. The performance of an action from seeing another perform it, marks still a further advance. Imitation is not to any great extent instinctive. It does not occur very markedly in the first year of infancy; and, when it does begin, is somewhat slow in its progress. It is illustrated in various movements and combinations of movements, and conspicuously in the articulations of speech. Imitation could not take place without original spontaneity. The process may be exemplified by the case of vocal imitation. Sounds are emitted spontaneously from the vocal organs; they make an impression upon the mind as indicating pleasure or pain. With certain pleasures are associated certain sounds; with certain pains, certain other sounds. When now a sound is heard from some outside source, by association a resemblance is suggested to sounds which the child's own vocal organs have produced; these last, in turn, suggest the movements which are necessary to repeat sounds. They are repeated, and a gradual adaptation takes place between the external sound and the one produced by the vocal organs. First, short syllables easily produced by the voice are acquired (pa, ma, etc.); then two or more syllables conjoined; and so on, till the full command of speech is obtained. After imitation has once been successful, it cannot always be repeated. On the contrary, it usually requires considerable labour to maintain and establish permanently the attainment. Children are very often unable to repeat at the wish a sound which they have shown themselves able to pronounce. Repetition, however, soon strengthens the association and cures the difficulty. In precisely the same way, imitation of movements takes place. A child observes the movements of its own limbs, and establishes an association between the sight of those movements and the efforts put forth to cause them. Seeing movements of others, he compares them with his own, and corresponding movements of his own are repeated and conformed to the external motions. The difficulty of effecting imitation is greatest where the movements to be performed are not within the range of eyesight. A mirror may remedy the difficulty, or the voice of a bystander telling whether the movement is correct or not. The teaching of the deaf to speak is the greatest triumph of remote association. There must, of course, be a stimulus to imitation of one sort or another. There must be a pleasure to be derived from the imitative effort. Frequently, imitation may be accelerated by the direction of the voice in tones of command; frequently by mere imitation of the imitation, as of the nurse with the child. Whenever, too, any action seen appears by the associated signs to confer great delight upon the one performing it, and there is any link to connect it with one's own capabilities, imitation is at once prompted. Where there is a strong impulse, the accomplishment is easier, quicker, and more certain. Imitation undoubtedly is, to some extent, a matter of natural capacity. The power to imitate also grows with practice and all the acquired habits. A delicacy of apprehension by ear and eye is reached after long practice, which makes the accuracy of imitation seem wonderful. Where natural bent and great practice are combined we have, perhaps, the most perfect exemplifications of the power.

OBEDIENCE TO WISHES.

§ 15. A further refinement of volitional attainment occurs when a movement is executed in obedience to an idea of that movement. This, however, is only a consequence of the representation of experiences. An experience is recalled, and, with the cognition, is reproduced a stimulus to volition, and if there be sufficient strength of feeling to set activity in motion, the action takes place. This strength of feeling arises in the anticipation or suggestion of some present pleasure to be realised by the act whose idea is before the mind. Out of this ability to be guided in voluntary action by intellectual associations represented comes the full maturity of volition. The simplest form of obedience yielded to wishes is the volition inspired by an original stimulus of pleasure and pain toward the one and away from the other; but as education progresses obedience to wishes suggested in the vast complication of associations is a matter of greater extent and involving a higher power. The guidance of the associations may take place in two ways. The first of these is the presence of the idea of the action to be performed. There is awakened an idea of going to the other side of the room, taking down and putting on my overcoat which hangs there. There may be present a mental picture of my body rising up, my legs moving forward and alternating, my hand reaching out to take the coat, my arm swinging it behind my back, and then both arms going into the armholes and adjusting the garment on my person. Supposing there is an adequate motive for doing all this lying behind, as the desire to go out of doors, these successive pictures rise in the mind and become antecedents of the various intermediate and final actions accomplished. This is one method by which representative cognitions act upon volition. As associations become more firmly cemented and more highly representative, an abridgment of this process occurs. The idea of the effect to be produced takes the place of the idea of the movements to be accomplished. For instance, in the example just taken, the idea of the coat on my back and the feeling of warmth consequent thereon would be the intellectual antecedent to the actions necessary to secure the effect; the intermediate associations being integrated, merged, and consolidated, so as to occupy no appreciable portion of our consciousness. This is the highest and most complete development of volitional power. It is scarcely necessary to observe that such is not acquired instantaneously. The number of acquisitions of this character varies with different individuals and different times of life, but in no case can any such become fixed till a considerable amount of representation has taken place. First, simpler movements become involuntary. Then, as the mind grows in complexity, the more complicated operations pass into permanent acquisitions, so that they may be performed with promptness and machine-like precision, the idea of the effect to be produced being sufficient to set a train in motion to proceed infallibly to its end.

GENERAL CONTROL OF FEELINGS.

§ 16. The general control of feelings and thoughts is attained only through the opposition of motives. The one who has the best control over himself is he in whom there is the most complete poise or balance of feelings. So that one emotion or another can be suppressed or excited upon occasion. The direct control of feelings is reached through the voluntary muscles. Indirectly, however, the organs of the body which are not amenable to direct control are affected by various muscular efforts, and with the effects feelings are inflamed. Sobbing is a proper involuntary act, but may be promoted by voluntary movements. Where, however, the organs are far removed from connection with voluntary muscles, as the heart, there is no voluntary power. Now, when feeling is experienced, it manifests itself through the muscular system in one place or another, and, of course, throughout the regions of the voluntary muscles. The physical effect also pervades the involuntary regions. If, then, upon impulse to movement under strong or weak feeling, a counter feeling is excited from some motive presented by past experience, the former moving toward expression, the latter opposing in case the latter is the stronger, movement is suppressed and outward manifestations are checked. By the checking of external indicia the entire physical system seems affected indirectly; the wave of emotion seems to regurgitate and abate its force, being overbalanced by the contrary feeling. Feelings thus balance each other in various degrees. Frequently there is an alternation of strength, and the will inclines first to one side and then to another. The beginning of a control of the emotions in human beings occurs largely through parental assistance. The child manifests violent emotions prompted by the lawlessness of central power bursting forth at the inspiration of some pleasure or pain, or taking its earliest rise from its own exuberance. These emotions are checked by parental command or physical punishment, and it frequently requires considerable of both to accomplish subjugation. Suppose, however, that in one instance a child's emotion is suppressed by the pain of parental interference. The next time the motive for a similar emotion is present there is an association between the yielding to this emotion and pain of punishment, together, of course, with a representation of that pain in some degree. A counter-motive in a counter-pleasure is thus generated. The represented pain may not be strong enough to overcome the motive to expression. The expression is repeated. If not, the punishment is repeated, the link of connection between the expression of the given emotion and the pain consequent is much strengthened. A third time, the motive to resist and suppress will be far greater. Perhaps a few repetitions will make the counteracting motive so strong as to give it the entire supremacy. In some cases a single infliction of pain is quite sufficient to give full control in a particular case. In all cases much depends upon the uniformity of the sequence of the pain upon the manifestation designed for suppression. Every one is familiar with the bad effect of irregular and variable discipline of a child. If he is forbidden to do a thing and rebuked for doing it once, while the next time he is suffered to have his own will, the process of education is much retarded. The beginning having been made by parental control, no different procedure intervenes to establish self-restraint. Intellectual associations revive pains and discomforts connected with a given action, and when the motive to that action rises there rise also the counter-emotions suggested thereby. As the reach of association is widened, remote consequences and connections are apprehended, and the force of motives is enhanced until there comes the large range of thought and admirable self-command of the highly-cultured man. Between this and the uncontrolled nature of the infant, the profligate, or the savage, are all degrees.

§ 17. It must be observed that this control of emotion implies not merely suppression, but also the evoking of feeling. This may be accomplished in two general ways, the one to act out the external manifestations, and the other to direct the thoughts as exclusively as possible to the end desired. The latter course involves the assumption that the thoughts themselves are under control, and its consideration may well be deferred till the matter of control of thoughts is referred to. Upon the former it may be remarked for raising emotions there seems to be some efficacy in 'going through with the motions.' If we draw down the features, indulge in sighs and lugubrious moans, we may actually induce grief; if we attempt to look cheerful, we may really become cheerful. So a fit of anger may be excited by violent movements; it is possible for us in these ways to 'summon up the blood.' Precipitate motion may create fear. But when an actor represents feelings, there may be an absence of the effect just commented upon from the fact that the actor is aiming at effect upon others rather than on himself. In the best acting, however, when the actor 'loses himself in his subject,' we have real feeling evoked.

§ 18. In closing this topic, we may observe that the measure of control of the emotions is very largely the measure of restraint of the outward manifestations. He who can control his features can control his feelings. Self-control and self-restraint mean little more than control over the various modes of action. He who can 'hold the tongue' is a man of self-control.

GENERAL CONTROL OF THOUGHTS.

§ 19. The control of feelings implies the control of thoughts, and the education of the feelings is an education of the thoughts;

but there are some ways in which the thoughts exercise a reactive control over the feelings, and some ways in which voluntary action seems to have power of control over the thoughts. The mind can arrest the current of association, can dwell upon particular topics, can exclude or lightly pass over others, and thus exercise a general, though not unlimited, restraint over its intellectual operations. The activity of the mind in association is not a strictly voluntary activity; that is to say, there is no balance of active forces in obedience to the behest of pleasure and pain; association takes place automatically. There is, however, a voluntary interference at which the opposition of motives is observable and a conscious preponderance of one set over another. This voluntary control does not appear to be direct. It operates by concentrating the mind upon a given point; that is, by inducing a flow of strong feeling toward that point. This feeling may be pleasurable or painful; in any event, if the feeling be strong, the attention will be detained. As it is detained there will be a greater stimulus to all the associations connected with the topic upon which there is detention. Each one of these will bring with it divergent impulses strong enough to create the consciousness of an opposition, and to require an effort to maintain attention in a given direction. If the motive to particular attention is strong enough, it will control; if a divergent force is more powerful, it will draw away the attention. Attention is arrested not only by pleasurable and painful feelings, but also by indifferent ones. Sensations, irrespective of their quality, secure the attention oftentimes; some emotions are neither pleasurable nor painful, and yet absorb attention. This is not the kind of operation which secures voluntary control over the thoughts. There must be a play of motives, the results of experience, in order to produce the most highly complex and perfect exercises of volition. These motives are no different from all other motives that affect voluntary action. They take their rise in pleasure and pain, and the connections between the given action and associated pleasure or pain may be direct or remote. 'The intellectual basis of a selective attention is known to be the process of identification of the present with the past. We think of the round form of a shilling when the shilling recalls the collective past impression of round things. On this ground the occurrence of some other round things along with the shilling, as a ring and a circular stamp upon the table, would make us tend to think rather of the roundness of the shilling than of its colour or its weight. This is a purely intellectual determination; yet it is often the cause of our attending to one quality rather than to another for the time being. Short of this effect of an identity with the past, we do not make any property an object of attention. When a voluntary preference induces attention, it induces this effect of reviving by similarity the past accumulated impressions; roundness with accumulated round figures; silvery whiteness, with the accumulated visible effects of the same whiteness, and so on. Thus, on the one hand, an intellectual suggestion may be the proximate cause of the selective attention; and, on the other hand, a volitional impulse under the attraction of a feeling may be the cause. Now we have the power to overbear all these commanding attractions—pleasure, intensity, pain, intellectual coincidence—in favour of some property that has nothing in itself to force it upon our notice. This power, however, means nothing but the existence of other motives still, having a superior degree of force; for example, the motive of some great utility, as when we are looking at a signal-post, and attending to nothing but the characteristic movement that conveys the message.' 'When we are freely venting random impulses, being under no specialising motives, the course seems to be this: there is a complex solicitation of the sense or senses; some one effect, however, is more agreeable than the rest, and, by the primary law of our voluntary framework, will attract our attention to the neglect of the others.

'After a time sensibility is exhausted or enfeebled, and the act of attending ceases; the other effects now rise into prominence, and some circumstance gives a superior impressiveness to one of these.' (Bain.)

§ 20. It is not an easy matter to trace the operation of the will in the control of ideas to and through the muscular movements. The effect is in many cases so minute that it cannot be observed; but so far as observation has gone there is here also confirmation of the general truth that the voluntary activity is an activity which chiefly concerns the muscular system. It is sufficiently evident that when an impression is made upon the mind through the epi-periphery, the mind meets the impression and apprehends the sensation through the muscular system. Now our ideas or cognitions are but representations of our presentative knowledge, and there is no mode of explaining the effects of the presence of those representations except by the fact that the representations occupy exactly the same channels and cover exactly the same ground as in the original case, though in fainter degree of intensity. If this be so the muscular effects will be present, though less intense. The ideal rose is a restoration of the currents which, were the rose present, would lead to its circumscription by the eye, or to the adjustment of the eye to the object; the movements, however, are only incipient; they stop short of the actual movements and adjustments. In thinking of the colour, there is a restraint of the incipient movements that would adjust the eye to the shape. In passing to think of its odour, there would be a change to the incipient movements of snuffing the air through the nose and closing the mouth. And similarly with other ideal apprehensions and changes from one train of thought to another.

§ 21. It will now be seen how potent an aid is introduced to control of the feelings in a control of the thoughts. There being once established a power to direct the thoughts, and reproduced thoughts carrying with them reproduced feelings, it is a great help to the subjugation of any emotion to be able to direct the thoughts to some topics unconnected or remotely connected therewith. There is an outburst of grief over the death of a child, for instance; it being painful, there is a movement toward avoidance, a desire, a motive, to get rid of it. By the pressure of the motive to avoid grief as associations connected with the lost one rush into and through my mind, by voluntary effort I arrest the attention perhaps on a story-book possessed by the child. Detaining my attention persistently upon that book, associations pertaining to the book, to story-books, and to books in general are raised up until I pass into a train of thought which introduces entirely different emotions from those of grief; the latter are stilled, and my mind relieved. In similar manner emotions desired may be evoked. Thus by the high development of control over feelings and thoughts through the mutual influence of each upon the other, the highest and most thorough self-command is attained and the voluntary powers reach their greatest perfection.[1]

INVOLUNTARY AND VOLUNTARY REDINTEGRATION.

§ 22. The foregoing exposition enables us to perceive very clearly the difference between that redintegration which proceeds with machine-like certainty and directness and that which is consciously determined by selective volition. We have seen, also, in former chapters, how we control redintegration by detaining the attention. This was illustrated very remarkably in our notice of the operation of trying to remember anything. The conclusions which are apparent are that involuntary redintegration is organised and voluntary is partially-organised redintegration. That is to say, the former expresses habits of mental action fixed and organised by heredity or individual experience, or both; the latter indicates the uncompleted organisation of such habits. The former is controlled, as we say, by habit; the latter, by present pleasure and pain, according to the laws hitherto mentioned.

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[1] Up to this point the exposition of the course of acquiring volitional control is largely a condensation from Prof. Bain's *Emotions and Will*, which the reader is recommended to examine in this connection.

§ 23. That there must frequently be a conflict between the forces of habit and present inclinations is as obviously a deduction from these premises of fact as it is itself a fact of universal experience. And this conflict, it need not be repeated, gives rise to those states of balancing motives which exhibit our power of choice. It is, however, none the less true that ultimately the strongest motives prevail. While the state of hesitation lasts we are conscious of volitional movements and power. After the fiat has gone forth we are conscious only of results in action.

§ 24. That redintegration is governed by the impact of forces from without, furnishing new material for its action, is not to be forgotten. So far as such forces determine the redintegrating activities, irrespective of the reactions, the result is involuntary redintegration. Similarly the aggregations of feeling, which through the reacting powers are developed in associations and representations, frequently produce a persistence of ideas which is involuntary and opposed to the inclinations of selective volition. The attention is held through quantity of feeling aroused, and attempts to expel the representative object only bring up its strongest associations, and then the same object again, so that it persists spite of our efforts. We have thus what has been called the 'Fixed Idea,' which operates apparently in opposition to the law of pleasure and pain. Its effect is explicable, however, in just the same way as the effect of a strong impact from the external environment generating quantity of feeling. The attention is held, spite of the movements of voluntary redintegration in opposite directions. In the case of the fixed idea, the quantity of feeling is aroused through automatic reactive movements, which are themselves determined by the laws of association and representation. The mental power is concentrated for the time upon the persisting object, although there is a voluntary movement in opposition. In many cases the fixed idea is accompanied by fear, which tends to paralyse all movement whatever when it becomes strong, both redintegrating and efferent activity. Altogether, the fixed idea belongs to the category of habit, as affecting the development of states of consciousness.

DESIRE.

§ 25. In a former chapter (Chap. XXVIII. § 13) we learned the genesis of desire and its relations to volition. When an impulse of attention extends toward action, and a counteracting impulse arises, or a physical obstruction exists, the pressure of the restrained impulse creates the state termed desire, a craving for that which is withheld, to do that which is prevented. If a toper sees upon the counter before him a glass of liquor, reaches forth his hand, takes it unhesitatingly and drinks it, the mental experience does not exhibit the state. The attention is fixed, and volition proceeds at once to its end of gratification so rapidly as scarcely to give opportunity for realising the intermediate state of desire. But if, when the impulse is felt to seize the glass, a counter-motive springs up from associations of past pains experienced either primarily his own or those of others, then the restraint thus brought to bear develops a state of desire. Equally so if the motive be that the man has no money with which to pay for the drink; equally so if the restraint is wholly extrinsic, as if the bar-keeper should refuse to sell him the coveted drink. So, when a man under the influence of passion is about to spring upon an opponent who has excited wrath and is held back by the hands of others. All of these cases exemplify desire in different degrees of intensity; the greatest intensity probably occurring where a strong impulse exists which has been well resisted, but to which the resistance is just giving way before the rush of waters.

§ 26. It is obvious, then, that the state of desire may arise in connection with presentative or representative feelings. In the more highly representative feelings desire is apt to be the ultimate volitional state. Certain associations of pleasure and advantage create complex motives; as fame, wealth, future happiness in a world to come. These ends are limitless, and the last certainly never can be satisfied in any degree in the present life. Powerful desires, then, are formed with reference to all these ends, and we never pass beyond the state of desire into that of full fruition in our lifetime. The restraints against satisfying action forbid anything except intermediate action in directions which we think will be auxiliary to the main end.

§ 27. Where there is only an external hindrance to the accomplishment of an action, or so great a preponderance of volition in one direction that it amounts to a determination which is hindered only by external circumstances, the state of mind called intention is generated. By this use of the word, however, foreknowledge is not meant; sometimes we say we intended a thing should happen when we mean that we expected it would happen. Here the volition only is referred to. I intend to go on a vacation when I get money from a particular venture. Having obtained the money, I shall go; there is nothing but an external condition which prevents my going; when the hindrance laid upon me by that condition is removed, I am free to go.

§ 28. The sources of desire are present pains stimulating to activity. The things desired are things which will relieve the present pain. The movements toward the ends of desire are either instinctive or experientially organised. The instinctive desires are usually very vague and indefinite, and take the form of yearnings or longings for we know not what. The progress of association has, in its intermediate stages, the effect to specialise and define the objects of desire, making them more certain. In the increase of complexity, however, in the associations, vague and indefinite desires take their rise that are not capable of circumscription or satisfaction. Of the inherited impulses to desire, the appetites suggest themselves most prominently. The method of satisfying these is comparatively simple; the desires depend upon bodily conditions varying with the repletion and exhaustion of nutrition. Even in connection with the appetites, however, association has much to do, directing the special modes of gratification, strengthening in certain directions and diminishing in others, and creating a general control. Both in the cases of instinctive and association-created desires, the desire is vastly enhanced by the definiteness of the realisation of the thing desired. The experience of a pleasure develops a higher degree of desire, because the feeling of the pleasure itself in its incipiency is reproduced with greater definiteness. The farther removed the reproduction from a distinctly experienced pleasure, and the greater the differentiation from the real into the imaginary, the less piquant and intense the desire. The desire for the bliss of Heaven is intense in proportion as there is attached to the idea of Heaven vivid representations of past happiness experienced in this life. The constructions of the intellect establish objects of desire which are new, but the newness is that of a new grouping of old materials. The higher and broader the education, the more numerous and the more refined become the objects of desire, and, consequently, the less becomes the intensity of specific desires and the greater the control exercised over them. It should further be observed that in the fruition of pleasure there is more or less desire aroused which is still unsatisfied; for in every experience of pleasure associations are awakened which carry with them their own impulses to volition that, being checked, leave states of desire in the midst of enjoyment.

§ 29. Desire is not a prelude to volition; it is volition in exercise. Its distinctive peculiarity is the consciousness of something lacking. Pain from the absence of something is its feeling side; inhibited movement away from this pain and toward some more or less distinctly and definitely represented pleasure is its volitional side. All conscious voluntary selection, therefore, implies desire, though the pleasure of realisation may, as we have seen, follow so closely as to make us scarcely conscious of the intermediate state of desire. Our study of pleasures and pains, and of ends and dispositions, will illustrate amply the objects of desire.

ENDURANCE.

§ 30. The term endurance expresses not merely a voluntary state, but an involuntary condition. It indicates a bearing up against oppression, a resisting of pain, a checking of desire, a patient suffering without active effort for relief. In one sense the term endurance refers to the entire supporting power of the mind which underlies everything, and which gives a capacity to receive impressions—the passive power which at an earlier stage was exhibited and described. In this place, however, we are to consider endurance as a state of quiescence in opposition to pain, or of settled contentment.

§ 31. In this light there is an apparently involuntary as well as a voluntary endurance. Of course, after repetition, the stage is reached wherein endurance is involuntary. And whether any instinctive tendencies to endurance can be traced is an interesting question. It seems, however, that what we term endurance is a state of mind which we reach after a process of acquisition of voluntary power under the guidance of pleasure and pain. We learn that our happiness is ultimately promoted by remaining quiet and not actively resisting the discomfort we feel, or that it will be for our interest to oppose the promptings of a desire when it presses by dead resistance, so to speak. Endurance, then, is a state of mind exemplifying the conflict of motives. At present pain prompts to expression of the pain and movements in avoidance of it; here is a set of motives on one side; the recollection of relief from pain obtained by simply bearing it, together with the approval of others thus obtained for courage, fortitude, and virtue, and also the remembrance of unpleasant consequences which followed yielding to the natural impulses, furnish opposing motives that prevail. The state of pressure then ensuing is the state of endurance. Desire and endurance are the obverse of each other. Desire is the pulling at the rope; endurance the gravitation which opposes. Endurance is a continuing state of dead resistance. It does not aim at or result in any action which is not countér-active; and when the action subsides to which it is reaction, the state of endurance abates with it into the ordinary quiescence of the mind. It may be considered an ultimate state of volition, for it tends to nothing else, but is completed in itself, passing away when its purpose is accomplished. It is a pre-eminently characteristic state of passive power.

§ 32. When the pressure is of more highly representative motives, the opposition which develops endurance induces the feeling of contentment. This is a name also for happiness in general, but its specific reference is to happiness which comes from throwing off the desire for other kinds of happiness than the one possessed. A sense of the value of such other happiness is experienced, and a desire for it arises; in opposition there is an endurance coming from a counter-impulse with which is connected association of the comfort, desirability, and advantage of one's present condition. By this the desire is repelled or quenched. Repetitions establish a habit of repulsion, and contentment reigns as a prevalent and commanding state. If a person has a strong desire for wealth, power, or fame, his opposition to the cravings of such a desire from various motives, whatever they may be, nullifies the irritation, and, as the desire subsides, produces peace. If one is anxious to accomplish a certain task and 'the flesh is weak,' patient and indomitable bearing up subdues the offending members, and secures at length tranquillity and concentration of forces.

§ 33. From these data it will be observed that endurance is simply balanced mental reaction continuing. If a motive presents itself and is promptly met by another which nullifies it, and the whole takes place in a moment of time inappreciable, we cannot say there is endurance. The element of continuance is indispensable. And when the opposing motive overpowers its antagonist and itself runs into action, there is not endurance. But when action and reaction are balanced—equal and opposite, there is a state of endurance. This seems to be the sum of it. The idea of something painful which is attached to the word endurance comes from the fact that the opposition is not awakened except from the presence of associations calling up pain more or less, and also that opposition is itself painful, especially if the antagonist pressure is strong. There may be endurance either of a positive pain, or of the pain which is produced by denying, resisting, and endeavouring to subvert a desire for pleasure. One occurs when a man holds himself still under a surgeon's knife; and the other, when in curing himself of the habit of chewing tobacco, he places the tobacco-box on the table before him, and refrains from tasting the narcotic delight.

DELIBERATION.

§ 34. A state further illustrative of the conflict of motives is that of deliberation. In the promptings of feeling counter-motives arising hold the mind in suspense, delaying action, till what is termed a conclusion is reached; that is, till there is a sufficient preponderance of motives of one side over the other to determine action in any path. We are then said to choose; and the presence of conflicting motives weighing against each other, if they are tolerably well balanced, gives us, as has been said, the consciousness of a power of choice. There is nothing peculiar about such a state, requiring explanation; the chief remark to be made is that it exists in its perfection only in minds furnished with a considerably high representative development of thought and feeling. There must be an apprehension of a wide range of motives in order to make deliberation at all habitual, and such a range only comes with experience. The child mind is not deliberative; it does not forecast and calculate results with a far-reaching power; but it grows in experience and finds so many pains gathered from ill-considered action and so many pleasures lost thereby, that, when a course suggests itself, there springs up in opposition a representation of those pains experienced which constitutes a motive to delay. Action being thus checked, the subject is detained in the mind, and all the associations of pleasure and pain which it is able to collect are passed in review and set off one against the other. When no new considerations occur, or if some suggestion arises of evil from further delay, action is brought on.

§ 35. It is evident that the efficacy of deliberation is variable, and dependent upon education largely. Mere delay in coming to a conclusion may occur without much activity of thought to determine whether or not the conclusion is wise. Again, there may be activity of thought, but of unbalanced thought, in which either the *pros* or the *cons*, as the case may be, have almost exclusive sway over the other. Many people delude themselves with the idea that if they take time to consider, they will necessarily thoroughly consider; whereas, in fact, their minds run over and over the same line of thought, prompted by a potent desire, and nothing contrary has any chance to come in. Still again, there may be an ability to review with fairness reasons for and against, but no power of far-reaching analysis or wide range of thought on either side. The associations may be entirely superficial and the conclusion is hence of little value, though the deliberation may be long. Whatever broadens and sublimates thought, whatever increases general culture, both creates a greater aptitude for deliberation and renders the deliberation more to a purpose. The same truth is specially illustrated in the fact that deliberation concerning something unfamiliar is a much less satisfactory exercise than when over that which we are acquainted with. This is seen in an inferior way in the perplexity which occurs when we do not know how to do a thing we feel ought to be done. When one unused to carving is called upon to cut up a fowl on the table, his unfamiliarity causes delay, slowness, and awkwardness to appear; this, however, is not a case of a high order of deliberation. But when a person is considering two courses to be followed and is ignorant of the circumstances attending each, he is at a great disadvantage as compared with him who knows thoroughly the bearings and tendencies of the opposing lines of conduct. The conclusion of the latter has a far greater chance to be valuable and safe than that of the former.

§ 36. Deliberation may of itself be either pleasurable or painful, according to the pressure of motives. If there is a strong desire, prompting resistance to it is painful; the state of endurance is generated in connection with deliberation. At other times action is painful, and the suspense of action agreeable. There is a luxury of suspense which sometimes grows into a passion. The two extremes of hasty action and prolonged indecision may not only arise in particular cases, but may grow into confirmed habits of mind.

RESOLUTION.

§ 37. The state of mind which marks the conclusion of the deliberative process when the mind is determined in the course of its action, but cannot yet complete that action, is termed resolution. We resolve, 'make up our mind,' to do something, but there are external hindrances which prevent our doing at once what we wish to do. Resolution, then, is a preliminary volition in furtherance of a more remote end. There does not seem to be any substantial difference between resolution and intention. The word resolution is generally employed to describe in its incipiency the same state which, when established, is called intention. 'I intend' to do a thing conveys rather the idea of a settled purpose; 'I resolve' creates the impression of having just come into the state of mind after doubt or conflict. But too much stress should not be laid upon such distinctions. The prime act in either case is that of a determination of volition toward some object which is not yet attainable, and the consequent attitude of watching for opportunity to put into action one's ultimate desire; when the time for such action comes the volition is ready to improve it. Were it not for such intermediate volitions it would be impossible to follow any consistent, settled purpose of life, or to carry over into the future the suggestions of the present which cannot be acted upon.

§ 38. If, after the mind resolves to do anything, there is some interval before it is enabled to accomplish, there are apt to be numerous distractions to weaken the force of the determination. Especially if the resolve be made in opposition to desires of considerable force which are in their nature continuing, the latter are exceedingly prone to undermine the resolution and break down its power. So, if there is a multitude of distracting forces, it is hard to sustain a resclution. Resolutions are sustained by a refreshing of the motive which prompted their adoption; and where the resolution is of such a character as to allow part performance, by an unintermitting and regular carrying out. Motives are refreshed by dwelling upon them and calling up the associations which would strengthen them. If a person resolves to form a habit of doing a certain act regularly, when temptation comes to depart from the resolution he may conquer the temptation by summoning up afresh the motives which led to the adoption of the resolution. And an unremitting performance of the act at the regular intervals strengthens with each additional performance the efficacy of the resolution, while a single failure weakens it more than many performances strengthen.

MISCELLANEOUS VOLITIONAL DETERMINATIONS.

§ 39. The dynamic element of volition, as we have observed, attends all conscious automatic action. It belongs to all conscious states. Every experience has relations involving automatic power either active or passive, moving outward spontaneously, or resisting inward movement. Hence all cognition postulates some volitional determination. All the processes of redintegration, whatever they may be, carry with them volitional movements with the dynamical element at any rate, and more or less of conscious choice according to circumstances. Hence attention, association, and representation have their volitional aspects. The connection of the feelings with volition we have sufficiently commented upon.

§ 40. *Assent.*—One form of these volitional determinations in which the dynamic element is the most conspicuous is that of assent. This state is somewhat different from resolution, in that the latter implies the putting forth of more active energy toward one's own personal actions.

In assent we agree, do not object, to a given result; in resolution we determine to actively exert ourselves to bring about the result. True assent often involves personal action in the way of co-operation, or even in the way of actively leading; but the prominent idea is that of falling in with some other mind. On the basis of assent are founded those determinations which take the form of promises and contracts. A certain state of facts is pictured to the mind, and the representation of myself as acting in a certain manner is suggested. I represent myself as so acting, with no opposing movement strong enough to hinder. I say then I intend to do thus and so, I expect to do so, I will do so, I promise to do so.

§ 41. *Belief.*—The volitional determinations of belief require much the same processes as those of assent. I agree to something; assent to it, and govern my conduct by this assent. Since belief applies solely to representative cognition, when a representative object appears there is a volitional determination in recognising it; then, when on the guaranty of the uniformity of nature the representative experience is projected into the future, the belief we have as to the future realisation or repetition of this experience carries with it a volitional condition of readiness to act upon the state of facts assented to in the belief (Chap. XXXVI.).

§ 42. *Expectation.*—When the near approach of the state of facts believed in as to occur under certain circumstances is apprehended, the state called expectation arises, with varying degrees of belief as to the certainty of the occurrence. In this state, the condition of preparedness to act is greatly intensified. It is well exemplified in the actions of 'squaring off' to resist an expected attack. The mind and the body are put in readiness to act according to the anticipated emergency (Chap. XXXVI. § 25 ff.). The same state occurs when the advent of the expected event is regarded as certain, though not near. I look for a thing to occur. I adjust my eyes and my other members so as to experience it; and thus I arrange my actions to conform to the anticipated experience for long periods of time perhaps. It is a form of belief, in which there is a more conspicuous exercise of volitional determination. Expectation, of course, refers only to future occurrences, while belief may refer either to the past or the future.

§ 43. *Effort.*—If volitional determinations are opposed by others, the movement of energy is frequently difficult, and made only with effort. What is usually termed effort is movement accompanied by a feeling of fatigue which comes from the moving organs. There is, however, a consciousness of the putting forth of energy against resistance which belongs to the conflict of motives and which marks a volitional determination. The fiat which is implied in volitional choice carries with it a sense of effort in proportion to the degree of resistance. On the side of feeling, effort exhibits a variety of pain; on the side of volition, there is merely a consciousness of the determination of energy, which is in no wise different from any other volitional determination.[1]

EFFERENT ACTIVITY.

§ 44. In an examination of the Genesis of Volitions (Chap. XXVIII.), we showed the connection between afferent, central, and efferent movements. We there saw that within the sphere of consciousness pain first stimulates movement and then, unless the cause of the pain be removed, abates and depresses movement; also that pleasure first arrests movement and then produces a reinforced movement. We also saw that the particular movements occurring when movement is inaugurated are adapted to each particular state of feeling by a process of education, of which the foundation is repetition, and which is accomplished by ancestral organisation and by individual circumstances.

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[1] See *The Feeling of Effort*, by Wm. James, hitherto referred to.

These facts gave us two laws of Efferent Activity (Chap. XXXII. § 34, XXXV. § 21): the one the law of Pleasure and Pain, the other the law of Organisation or Habit.

§ 45. It will be observed that the laws of efferent activity are in no wise different from those of redintegration, so far as the essential facts implied in them are concerned. And with respect to volition, efferent activity is only an extension of it. Every mental state, either directly or indirectly, has reference to the actions and reactions of organism and environment. This will hardly be disputed with regard to presentative states, and will be conceded with regard to representative, when we call to mind that the latter are but repetitions of the former under different conditions as to arrangement, intensity, and so forth. Hence, every mental state carries with it some determination to action. In other words, every mental state has a tendency to act itself out, unless interfered with or inhibited. When, therefore, such determination to action expends itself in the inner circuits, or more strongly in the inner and more feebly in the outer, the result is some of the phenomena of redintegration. When, however, the volitional energies are great enough to affect strongly the epi-peripheral nerve circuits, or some of them, action takes place. But the laws governing such efferent action are precisely the same as those governing the redintegrative action of the former case. There are the same influencing conditions of quantity of feeling, the same dependence upon pleasure and pain, the same obedience to habit. All this being so, we perceive the essential unity of all varieties of automatic mental action. We perceive that volition is, at the foundation, automatic spontaneity, capable of action and reaction; and that this activity moves without consciousness and with consciousness; that where it occurs with consciousness we are not conscious of the movement, but only of its results and of its initiation when there is a hindrance or inhibition;[1] that on this hindrance and interference by complexity of movements depends conscious life itself, which passes into unconsciousness, whenever the active determinations proceed to their conclusions unhesitatingly, directly, and certainly. We also see that what is usually called voluntary action, or action the result of choice, is action resulting from a conflict and balancing of volitional determinations, but exhibits the same exercise of automatic activity that occurs in what is termed involuntary action.

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[1] See 'Concluding Remarks,' however, Sec. 47.

§ 46. The influence of the fixed idea on efferent activity will also be apparent. In view of the tendency just adverted to, of an idea to act itself out, when by association and representation quantity of feeling is aroused sufficient to detain the attention and create the state exemplified by the persistence of an idea, the efferent activities related by habit to that state will be put forth, frequently in opposition to the activities allied with other states generated according to the laws of pleasure and pain which are vainly endeavouring to supersede those necessitated by the state of persistence. Thus through the fixed idea a paralysis of all movements is frequently caused, except those which have become inseparable concomitants of the persisting state. The result of this is oftentimes an exercise of efferent activity involuntary, against conscious choice, undesired, undesirable, and even very disastrous.

CONCLUDING REMARKS.

§ 47. There cannot fail to be suggested to us, after all that has been said, some final considerations upon the ultimate nature of volition. I have allowed myself in this work to be put in the position of characterising volition as sometimes involuntary, and of comprehending under the term volitional both the voluntary and involuntary, ordinarily so-called. I have done this in preference to excluding volition altogether from the list of independent aspects of states of consciousness. For, obviously, not all states of consciousness exhibit conscious voluntary selection. If we were to confine volition to the exhibition of choice, we should find it to be merely a case of action resulting from the opposition of determinations, and thus not an ultimate fact, since we should still have to refer to the dynamic element for explanation, choice being only a particular case of determination. But all states of consciousness do exhibit some sort of active determination, and the consciousness of this active determination is always present wherever there is feeling and thought. These conscious determinations of energy human science has preferred to call volition, though, I think, there is much to be said in favour of the term *Conation*, which Sir William Hamilton employed. If, however, we retain the term *volition*, as on the whole seems to me to be necessary, I see no alternative but to employ it as inclusive of all conscious active (and counteractive) determinations, both those ordinarily styled involuntary and those called voluntary. In this sense, then, *I will* means *I put forth energy*, *I move toward action*. Under certain circumstances of putting forth energy, namely those before mentioned, I am conscious of giving a preference to one direction of this energy over another which suggests itself, and toward which there is some, though not so great an inclination. This is *choice*.

§ 48. The unconscious action belonging to motor nerves raises a more serious difficulty still, with respect to the place of volition as an independent phase of conscious experience. It seems to me pretty well established that there is no consciousness of efferent movement, but only of the results of that movement reported by afferent nerves. If this be unqualifiedly the case, our volitions would seem to be feelings. We may have feelings of outward movement against the environment, and feelings of inward movement against the organism. But what we experience in either case arises when movement along afferent nerves reaches the centres and we are not conscious of the passage of any motor current save by results upon other parts of the organism than the motor nerves Now when we consider redintegration, we find the same situation, we are not conscious of movements outward, but of a succession of results of such movements, the circuit of nervous movement being an inner one and the quantity of motion much less. We experience a representative state which is different from presentative impressions made contemporaneously. By this difference (chiefly of relative vividness) we determine one as having a central and the other a peripheral origin, the one as produced by automatic activity, the other as produced by environment. When attention is directed to anything, our consciousness arises *after* the motor impulse has gone forth ; as also with association and representation. The representative object appears in consciousness as the result of a motor impulse which, starting from the centres, accomplishes a more or less wide circuit, and arrives again at the central region, there to propagate other motor discharges, in their turn to reappear as ideas and feelings (Chap. XL. § 4 ff.).

When, therefore, one state appears which involves certain movements, and this is followed by a state involving opposed movements and the two alternate, if finally the one becomes more persistent and strong while the other grows less resistent, weaker and less frequently recurrent, increased movements outside the centres are reported, and we cognise the mental phenomena we call volition. But we are conscious only of the results of the active movement, not of the movement itself. We are conscious of certain feelings attending a conflict of movements, but only as the consequences of those movements.

§ 49. The bearing of these considerations upon the ultimate nature of volition is plainly to induce the belief that will is nothing more than a mode of feeling. We should then have feeling as homogeneous indefinite consciousness. From this there would be differentiated cognition as definite, integrated consciousness, but volition would be the feeling of representative conflict, representative action and resistance. All consciousness is of motion and resistance. Hence we should have two grand divisions of mental states: Consciousness of Peripheral Action and Reaction (Organism and External Environment), and Consciousness of Central Action and Reaction (Organism and Internal Environment). Each of these divisions would be subdivided into Feeling or Indefinite Consciousness, and Cognition or Definite Consciousness. Consciousness of Peripheral Action and Reaction would give our knowledge of the External World; Consciousness of Central Action and Reaction, our knowledge of Mind. Behind all Consciousness there would be postulated the Subject Ego, the source of all Consciousness, the Unconscious Automatic Activity, of which we have no consciousness further than that we postulate such a Power inevitably in all exercises of Consciousness.

§ 50. The foregoing thoughts I express, not dogmatically, nor indeed with my own assent to anything more than the possibility of their truth and the consequent possibility of a reconstruction of psychology from further researches into the ultimate nature and connections of the several aspects of states of consciousness. Since such thoughts have entered my mind after careful study, and since they would be of importance if they were shown to have a truly scientific foundation, I deem it my duty to present them, leaving the whole matter for further elucidation to other students of psychology, and perhaps to my own future deliberations.

CHAPTER XLVII.

ABNORMAL DEVELOPMENT.

§ 1. WE have been occupied hitherto in tracing lines of the development of states of consciousness as they proceed, normally evolving the ordinary and common varieties of redintegration, emotional states and volitional exercises. But there are some abnormal exhibitions of consciousness which require treatment at our hands.

§ 2. *We need not stop to consider extraordinary developments of mental powers occurring along the course of normal growth.* There have been prodigies in respect to memory, reasoning, and imagination—abnormal growths of normal powers. It is not intended to include such under the present head, since these cases do not exhibit any conditions or exercises of consciousness not the outcome of natural and regular exercise of ordinary faculties.

§ 3. Nor is it designed to regard common errors and illusions occurring in the ordinary exercise of mental faculties as instances of abnormal development. There are illusions of perception arising from confusion of impressions or from misinterpretation of the sense-impression, as in perceptions of distance and solidity, and all kinds of optical illusions; there are illusions coming from vivid expectation; there are errors of memory and erroneous beliefs as to our own experience; there are illusions of all sorts coming from the employment of the reasoning powers and the imaginative also. But all these occur in what may properly be considered normal consciousness. Hence we will exclude them from our present consideration.[1]

DREAMS.

§ 4. The most common instance of extraordinary consciousness is found in dreams. Indeed, we can hardly call their production a matter of abnormal development at all; but they, nevertheless, show consciousness subsisting under conditions different from those of its ordinary existence. (See Chap. XXXIII. § 5 ff.) Those conditions are chiefly a diminished susceptibility to epi-peripheral stimuli, and a suspension of voluntary attention to a great degree, arising from the state of interrupted consciousness which we call sleep.

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[1] See *Illusions*, by James Sully.

§ 5. The result of such conditions is to induce a form of consciousness in which the automatic activities produce a series of representations, according to the laws of redintegration, which are uncontrasted with and hence uncorrected by present sensational influences from the external world. The dreamer has his sole conscious life in the things which the automatic activity represents. To the dreamer, what appears in consciousness is real and the only reality; his dream world is the only world.

§ 6. The peripheral sense-organs are not wholly inactive during sleep, but a more powerful stimulus is required to make a conscious impression. A bright light suddenly introduced, a loud or unusual sound, touches upon various points of the surface though not sufficient to awaken, will often affect the dreams of the sleeper. Olfactory and gustatory impressions will usually become transformed into visual percepts in dreams.

Ento-peripheral stimuli have a more marked effect upon dreams than epi-peripheral, for the reason that a greater degree of the former may subsist without waking the sleeper entirely than in the latter case. The influence of indigestion and of turgescence of the reproductive organs are perhaps the two most conspicuous illustrations of the effects of organic conditions. The modifications of dream-consciousness wrought in diseased conditions of the body are also very remarkable.

§ 7. The subject-matter of dreams is thus controlled to a considerable extent by peripheral influences. Aside from these, the course of redintegration in dreams is largely governed by the determinations of activity of the more recent waking hours; we dream of that which was upon our mind on going to sleep. Business cares, perplexing problems, great sorrow, engrossing the attention in the former waking state, continue to occupy the mind in dreams. Unconscious redintegration goes on in profound sleep, and when consciousness is partially roused, the results of these unconscious processes appear in dreams. A man may then dream that he has solved the puzzle over which he has distressed himself, and may solve it in his dream. Instances of this character are abundant. Dr. Carpenter records several. Condorcet saw in his dreams the final steps of a difficult calculation which had puzzled him during the day. Condillac tells us that he frequently developed and finished a subject in his dreams which he had broken off before retiring to rest. Coleridge's dream-poem 'Kubla Khan' is another instance.[1]

§ 8. Visual images are the most prone to occur in dreams. Frequently even auditory impressions are transformed into visual. Next to these in point of frequency come movements. We are doing or trying to do something. Talking is a common form of this motor activity.

§ 9. The absence of sensational correctives causes not merely an impression of reality in our dreams, but occasions an exaggeration in the effect produced far beyond the normal order of things. The nightmare is a case in point. This very distressing phenomenon usually gives rise to, or ensues from, dreams of the most startling and hideous character, all springing from an external pressure or an internal uneasiness, which in waking moments would disturb the ordinary course of thought and action in a degree vastly inferior to that produced in sleep. Dr. Reid tells that having had his head blistered on account of a fall, and a plaster put on which pained him during the night, toward morning he dreamed that he had fallen into the hands of Indians and been scalped. The experience of every one bears witness that the most trivial and insignificant impressions often produce the most distorted and exaggerated dream-experiences.

§ 10. The loss of power to correctly gauge and estimate the relations of things is further shown in erroneous appreciations of time. Images pass through the mind in trains which cover successions of events represented in dreaming as then filling hours or days, I do not know but years; but which in truth occupied only a few minutes or seconds of time in the dreamer's consciousness. Ideas of the time originally occupied by the events recalled in dreaming are correct if they were originally fixed correctly in the mind, but the relations to the present time of the conscious subject are wrongly apprehended, because there is no longer an objective measure of time by which rectification can be effected.

§ 11. The laws of redintegration are sufficient to explain the connection and coherence of dream-images, while the incompleteness of the consciousness accounts for their incoherence. Mr. Sully thus sums up his treatment of dream-associations: 'As to the form of dream-combinations, the least perfect and passive dreams owe their peculiar incongruity to the number and variety of the wholly disconnected sources of stimulation which simultaneously supply images to consciousness. More particularly the various degrees of irritability of the cerebral elements at the time serve very much to complicate and confuse the grouping of images and to explain why the ordinary paths of association traversed in waking hours are so seldom followed. In the case of the more elaborate and closely-connected dreams much of the verisimilitude arises from the action of organic dispositions or general tendencies of association which serve as so many rough forms of dream-thought. Such a general disposition would account for our attributing some kind of words and actions to the image of a man or woman which presents itself, though what the particular words are to be depends on the co-operation of the several existing causes already spoken of. Hence the mixture of a general reasonableness with a particular incongruity which marks so many of these dreams. Next to these influences, one must reckon the play of attention under the sway either of an impulse for rational unity, or of a dominant emotional tone somehow excited at the time, which tends to harmonise all inflowing images with itself. In the act of fixing attention on the internal imagery of our dreams we unconsciously modify it, selecting, adapting, and fusing according to the pre-existent ideas or emotional tone. The emotional key which dominates so many of our dreams is fed (*sic*) by the effect of previous images, and still more largely by the pleasurable and painful organic sensations of the time.'[1]

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[1] *Mental Physiology*, Chap. XV. Sec. 482 ff.

§ 12. It remains to be noticed that 'with respect even to our most coherent dreams, there is a complete suspension, or at least a considerable retardation of the highest operations of judgment and thought; also a great enfeeblement, to say the least of it, of those sentiments, such as the feeling of consistency and the sense of the absurd, which are so intimately connected with these higher intellectual operations.'[2]

SOMNAMBULISM.

§ 13. Where efferent activity follows the dream-consciousness, somnambulism occurs. In dreams generally, the muscular system is affected only slightly, momentarily, or spasmodically. In somnambulism there are combined and connected movements. Sleep-talking and sleep-walking with other attendant movements are the characteristic forms of this abnormal state.

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[1] *Mind*, No. V. p. 111. See also *Illusions*, Chap. VII., for more amplifie presentation of the same ideas. See also Carpenter, *op. cit.*, and Maudsley's

[2] *Illusions*, Chap. VII.

§ 14. In addition to motor action in obedience to the prevailing course of redintegration, there is a greater sensibility to afferent impression than in the case of ordinary dreams, but usually this sensibility is only in lines which develop experiences coincident with and collateral to the existing current of ideas. 'No ordinary sights or sounds, odours or tastes, pricks, pinches or blows make themselves felt; and yet if anything is addressed to the sleep-talker through either of his senses which is in harmony with the notion that occupies his mind at the time, he may take cognisance of it and interweave it (as it were) with his web of thought which may receive a new colour or design therefrom.'[1] In many cases, however, the entire current of thought may be altered in the mind of the somnambulist by some external impression not sufficient to restore the normal conditions of consciousness.

§ 15. The somnambulist on awaking does not remember his actions, and if he has any remembrance of his dream-state it is only that of an ordinary dream. But frequently on a recurrence of the somnambulistic condition he remembers what occurred in the former dream-state, but without any memory of an interval, however considerable it really may have been.

§ 16. It is evident that there is no arbitrary line to be drawn between dreaming and somnambulism. In fact the latter is only an extension of the redintegrating activity of the dream consciousness to efferent activity. Every dream is liable to have some extension of this sort. The tendency of ideas to act themselves out is no less conspicuous in partially or abnormally conscious redintegration than in the ordinary states.

HYPNOTISM.

§ 17. A general state of consciousness having many features in common with the somnambulistic can be induced artificially, thus giving rise to hypnotic consciousness. Hypnotism is 'a peculiar condition of the nervous system induced by a fixed and abstracted attention of the mental and visual eye on one object not of an exciting nature.'[2] The following is the general method of inducing it, with some of the chief symptoms: 'Take any bright object between the thumb and fore and middle fingers of the left hand; hold it from about eight to fifteen inches from the eyes, at such a distance above the forehead as may be necessary to produce the greatest possible strain upon the eyes and eyelids and enable the patient to maintain a steady fixed stare at the object. The patient must be made to understand that he is to keep the eyes steadily fixed on the object and the mind riveted on the idea of that one object . . . After ten or fifteen seconds have elapsed, by gently elevating the arms and legs, it will be found that the patient has a disposition to retain them in the situation in which they have been placed, *if he is intensely affected.* If this is not the case, in a soft tone of voice desire him to retain the limbs in the extended position, and thus the pulse will speedily become greatly accelerated, and the limbs in process of time will become quite rigid and involuntarily fixed. It will also be found that all the organs of special sense, excepting sight, including heat and cold and muscular motion or resistance and certain mental faculties, are *at first* prodigiously *exalted,* such as happens with regard to the primary effects of opium, wine, and spirits. After a certain point, however, this exaltation of function is followed by a state of depression, far greater than the torpor of *natural* sleep. From this state of the most profound torpor of the organs of special sense and tonic rigidity of the muscles, they may at this stage *instantly* be restored to the *opposite* condition of extreme mobility and exalted sensibility by directing a current of air against the organ or organs we wish to excite to action, or the muscles we wish to render limber, and which had been in the cataleptiform state.'[1]

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[1] Dr. W. B. Carpenter, *Mental Physiology*, Chap. XV.

[2] Braid.

§ 18. The characteristics of the hypnotic state are further described in the following passage:[2] 'The preliminary state is that of abstraction produced by fixed gaze upon some unexciting and empty thing (for poverty of object engenders abstraction) and this abstraction is the logical premise of what follows. Abstraction tends to become more and more abstract, narrower and narrower; it tends to unity and afterwards to nullity. There, then, the patient is at the summit of attention, with no object left, a mere statue of attention, a listening, expectant life; a perfectly undistracted faculty dreaming of a lessening and lessening mathematical point, the end of his mind sharpened away to nothing. What happens? Any sensation that appeals is met by this brilliant attention, and relieves its diamond glare; being perceived with a force of leisure of which our distracted life affords only the rudiments. External influences are sensated, sympathised with to an extraordinary degree; harmonious music sways the body into graces the most affecting; discord jars it, as though they would tear it limb from limb. Cold and heat are perceived with similar exaltation; so also smells and touches. In short, the whole man appears to be given to each perception. The body trembles like down with the wafts of the atmosphere; the world plays upon it as upon a spiritual instrument finely attuned.

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[1] Braid. [2] Dr. Garth Wilkinson, quoted by Dr. Carpenter *op. cit.*

'b. This is the *natural* hypnotic state, but it may be modified artificially. The power of suggestions over the patient is excessive. If you say "What animal is it?" the patient will tell you it is a lamb or a rabbit or any other. "Does he see it?" "Yes." "What animal is it *now*?" putting depth and gloom into the tone of *now*, and thereby suggesting a difference. "Oh!" with a shudder, "It is a wolf." "What colour is it?" still glooming the phrase. "Black." "What colour is it *now*?" giving the *now* a cheerful air. "Oh! a beautiful blue!" spoken with the utmost delight. And so you lead the subject through any dreams you please, by variations of questions and of inflections of the voice; and *he sees and feels all as real*.'

§ 19. The postures of the body will also affect the character of the hypnotic dreams. Any position which is a prominent expression of any state of mind will induce that state of mind. Bending over as in prayer will bring on prayer; raising the head and chin will develop pride and hauteur; doubling the fist will cause anger and perhaps blows to be given by the patient.

§ 20. An extraordinary muscular power is often seen when the attention is directed to anything which calls for the exercise of strength, especially when the hypnotised person is told he can perform the task. He will thus lift heavy weights which he could not lift in the normal state, and perform athletic feats which under ordinary circumstances he would not attempt. This exaltation of the power of muscular movement even goes so far in one instance as to enable a factory girl, whose musical powers had received scarcely any cultivation and who could not speak her own language grammatically, to imitate exactly Jenny Lind's musical performances in different languages.[1]

§ 21. Curious effects are sometimes produced from hypnotism partially induced. Professor Heidenhain has succeeded with a number of subjects in hypnotising one half of the brain and body, the other half remaining normal. One arm and leg can be moved at will, the other not; one eye sees distinctly, the other imperfectly or not at all. Actions which require the co-operation of both sides of the body cannot be performed unhesitatingly as they can be when both sides are hypnotised, the normal side exhibiting a tendency to make interferences with and inhibitions of the movements of the other. So remarkable an instance as that of hypnotising one eye has been observed; in these cases colour blindness ensued.[1]

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[1] Dr. Carpenter *op. cit.*

§ 22. Dr. Carpenter thus sums up the characteristics of this abnormal condition: (1) The entire engrossment of the mind with whatever may be for a time the object of its attention; so that sensory impressions are perceived with extreme vividness, long-forgotten ideas retraced with the most remarkable distinctness, and muscular movements performed with extraordinary energy and the most precise adaptiveness; (2) The *passive receptivity* of the mind (when not previously engrossed by some dominant idea of its own) for any notion that may be suggested to it; the particular course which such suggested train of ideas will take being much influenced by the temperament of the 'subject,' and by the previous habits of thought and feeling.[2]

§ 23. The following are some of Mr. Sully's observations upon the subject:[3] 'Braid, the writer who did so much to get at the facts of hypnotism, and Dr. Carpenter, who has helped to make known Braid's careful researches, regard the actions of the hypnotised subject as analogous to ideo-motor movements; that is to say, the movements due to the tendency of an idea to act itself out apart from volition. On the other hand, one of the latest inquirers into the subject, Professor Heidenhain, of Breslau, appears to regard these actions as the outcome of unconscious perceptions.' 'Animal Magnetism;' English translation, p. 43, etc.)

'In the absence of certain knowledge, it seems allowable to argue from the analogy of natural sleep that the actions of the hypnotised patient are accompanied with the lower forms of consciousness, including sensation and perception, and that they involve dreamlike hallucinations respecting the external circumstances of the moment. Regarding them in this light, the points of resemblance between hypnotism and dreaming are numerous and striking. . . . The condition of hypnotism is marked off from that of natural sleep, first of all by the fact that the accompanying hallucinations are wholly due to external suggestion (including the effects of bodily posture). Dreams may, as we have seen, be very faintly modified by external influences, but during sleep there is nothing answering to the perfect control which the operator exercises over the hypnotised subject. The largest quantity of our "dream-stuff" comes, as we have seen, from within and not from without the organism. And this fact accounts for the chief characteristic difference between the natural and the hypnotic dream. The former is complex, consisting of crowds of images and continually changing; the latter is simple, limited, and persistent. As Braid remarks, the peculiarity of hypnotism is that the attention is concentrated on a remarkably narrow field of mental images and ideas. . . . It being thus in a certain rapport, though so limited and unintelligent a rapport with the external world, the mind of the hypnotised patient would appear to be nearer the condition of waking illusion than is the mind of the dreamer. It must be remembered, however, and this is the second point of difference between dreaming and hypnotism, that the hypnotised subject tends to *act out* his hallucinations. His quasi percepts are wont to transform themselves into actions with a degree of force of which we see no traces in ordinary sleeps.'

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[1] G. Stanley Hall, *Recent Researches in Hypnotism. Mind*, No. XXI.

[2] *Op. cit.*

[3] *Illusions*, Chap. VII., Note 1.

§ 24. There are all degrees of completeness of hypnotic possession, the weaker forms being observed in cases where persons are said to be 'biologised.'[1] In this condition the mind responds mechanically, as in the complete hypnotic state, to external impressions and influences, but seems and is awake, and preserves afterward in most cases a distinct recollection of what occurred in the 'biological' state, both of which latter circumstances are contrary to those found in the conditions we have been considering above. These differences indicate nothing more than a difference in the intensity of the abnormal state.

§ 25. The hypnotic state can be self-induced.[2] From habit, or from the expectation of going to sleep at a certain time, persons sometimes fall into that condition without any effort or attempt to induce it. It may be suspected also that many times partial hypnotism occurs without the knowledge of the person experiencing it, and that in such states numerous of the phenomena of 'spiritualism' arise as hallucinations whose objectivity, nevertheless, is firmly believed in during the experience and on after recollection. The mesmeric state and the clairvoyant are further examples of hypnotic conditions. As to what the experiences in these states actually are, we have very little information of scientific value. I have personally endeavoured many times and with a great amount of persistence to get at the facts with regard to them, but have in every instance been baffled, either through the failure of any extraordinary events to occur in my presence or through the unwillingness of 'mediums' to allow any thorough investigation into what did happen. I am, therefore, compelled to say that I cannot add anything to what has been written by investigators of acknowledged scientific character upon these subjects. I believe, however, that the study of these abnormal conditions, especially hypnotism and some morbid states, will extend our knowledge both of mind and matter vastly beyond what is now anticipated.

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[1] Dr. Carpenter *op. cit.* Chap. XIV.

[2] G. S. Hall, *Mind*, No. XXI. Dr. Carpenter *op. cit.* Chap. XVI.

INTOXICATION.

§ 26. Intoxication is a temporary abnormal state brought about by the introduction into the blood of special substances, the chief of which are Alcohol, Opium, and Hasheesh. It is marked by a diminution of normal volitional control, and by an increased involuntary redintegrating activity. It is also marked by a pleasurable exaltation, followed by a corresponding depression after the intoxication begins to pass off. The state of feeling is the most characteristic feature of intoxication. In the period of exhilaration everything experienced in redintegration has a pleasurable quality, and even actual painful sensations are blunted and disguised. On the other hand, during the period of depression a general painful feeling colours and pervades everything.

§ 27. Sensations are exaggerated in this condition, and perception is frequently rendered illusory. Errors are made in estimates of time and space, and oftentimes the representative objects are assumed to be presentative. There is a great stimulation of the redintegrating movements, especially in the direction of constructions. Sometimes, as in the case of alcoholic intoxication, efferent activity is increased; sometimes, as from opium, a sedative effect is produced upon outward action.

§ 28. On the volitional side, the peculiarity of this state lies in the predominance of ideo-motor action, and the paralysis of proper voluntary action. The ideas which occupy consciousness are accompanied with an unusual strength of disposition to act themselves out, and are also attended with an extraordinary degree of pleasurable feeling. This condition prevents any painful associations with acts toward which the dominant ideas determine one from entering the field of consciousness, as they would do in the normal state. Hence the ordinary deterrents cannot operate, and therefore we have the phenomenon of greatly weakened voluntary control. Voluntary redintegration is of course affected in the same way as voluntary efferent activity. Repeated indulgence in the use of intoxicating substances induces a disease which accomplishes an intensification of the volitional paralysis, and which brings about more permanent conditions of depression and debility analogous to, but greater than, those seen after an occasional intoxication has passed off.

DELIRIUM AND INSANITY.

§ 29. Similar effects to those of intoxication follow diseased conditions of the blood, as manifested in delirium. The unbalanced exercise of mental powers which appears in the former state is conspicuous also in the latter, but in delirium illusions and hallucinations of perception are more prevalent than during intoxication, except when the latter is complicated with disease. Moreover, the general quality of feeling in delirium is painful. Again, after recovery there is small power of recalling what occurred or what the patient did during his delirious condition.

§ 30. Insanity is a general term covering abnormal consciousness of a somewhat permanent character which arises from diseased conditions of the nervous system. There are all varieties and grades of insanity, so that it is quite impossible to define its limits or to lay down any certain criteria applicable to all cases. Indeed, extraordinary mental powers and extraordinary exercises of them have frequently led to the charge of insanity, when there was not sufficient justification, or even no justification at all, except that the mental action was unusual. But the point to be noted is the association in the minds of men between 'great wit' and madness. And this alliance has commanded the attention of thinkers and observers of human nature at all times. Both Seneca and Aristotle assert that there is no genius free from an infusion of madness; and in all literature we find a reiteration of the same doctrine. The eccentric man, the progressive man, the one whose thought is in advance of his time, is very frequently accused of insanity; while nearly every reformer who, with singleness of purpose, devotes himself to the accomplishment of some specific result, is styled a monomaniac.

§ 31. The most extreme form of insanity of the most characteristic type is mania. In this case there is exhibited a state of great emotional excitability with want of volitional control, and an intellectual disturbance which may produce incoherency of thought, hallucinations, or the complete possession of the fixed idea. The uncontrollable passion, governing intellect, volition and action, which is the most conspicuous symptom of mania, is very apt to be a malevolent one, and the individual suffering seems unable to reflect upon the consequences of his acts. The most violent outbreaks follow each other in rapid succession, the physical expressions being principally those of anger and fear, though other emotional expressions are not wanting.

§ 32. In those forms of insanity of which idiocy is the extreme type there is a more marked intellectual and less evident emotional disorder. There are failures of the perceptive powers, and most notably of memory. The result of this is to create an absolute incoherency of ideas, all associations of experience are broken up, reasoning is impossible, and self-consciousness is impaired to a degree we know not of; it would seem that the sufferer is reduced to the level of the most rudimentary consciousness of animal life, where the representative power is so low as to preclude any consciousness of continuity of existence. With this intellectual prostration goes less of volitional control, of course, and also frequently paroxysmal emotional disorders. Consciousness is affected under all its aspects.

§ 33. In monomania we find the insanity of the fixed idea. This is only an exaltation of the phenomena of the persistence of ideas. It is regarded as insane when the impulse and tendency relate to some act or set of acts of a criminal nature, or when it is inspired by an obvious hallucination. It is oftentimes extremely difficult to determine whether the patient is, to speak paradoxically, an insane or a sane monomaniac. Kleptomania is a comparatively mild variety of this disorder.

§ 34. Without dwelling longer upon the different symptoms and varieties of insanity, the conclusion which I wish to impress upon the reader as the one chiefly concerning our present study is expressed in the following words of Dr. Carpenter, with which we will pass on to our next topic:—'In the first place, it may be unhesitatingly affirmed that there is nothing in the physical phenomena of insanity which distinguishes this condition from states that may be temporarily induced in minds otherwise healthy; for they are all referable either to excess or deficiency of normal modes of mental action. That which is common to every form of insanity, which is frequently its first manifestation, and which, in so far as it exists, renders the lunatic irresponsible for his actions, is deficiency of volitional control over the current of thought and feeling, and consequently a want of self-direction and self-restraining power over the conduct. With this there may be a general disturbance either of intellectual or of emotional activity, or of both combined, constituting mania; or there may be a partial or limited disorder arising from excess or deficiency of some particular tendency constituting monomania.'[1]

ANÆSTHESIA.

§ 35. In passing into and emerging from the state of suspended consciousness produced by anæsthetics, there occur states of abnormal consciousness which are very like those described under the head of intoxication. The resemblance is rather more close to opium, or hasheesh, than to alcoholic influences. I will not detain the reader with details of these phenomena, as they present nothing different from facts already considered. A very interesting account of conscious experiences under chloroform is given in an Appendix to Vol. I. of Mr. Spencer's 'Principles of Psychology,' and quoted in *Mind*, No. XII.

DOUBLE CONSCIOUSNESS.

§ 36. In treating of somnambulism, I alluded (§ 15) to the fact that on a relapse into the dream state the sleeper would sometimes have a recollection of what happened in his consciousness during former somnambulistic states, though when awake he would have no memory of the same. This indicates the beginning of a very curious phase of mental development, which in a few abnormal instances has resulted in a double consciousness. I will quote from Professor Ribot[2] a summary of the facts of three conspicuous cases:—'The most clearly defined and the most complete instance of periodic amnesia on record is the case of a young American woman, reported by Macnish in his "Philosophy of Sleep." It has often been quoted:—"Her memory was capacious and well stored with a copious stock of ideas. Unexpectedly, and without any forewarning, she fell into a profound sleep, which continued several hours beyond the ordinary term. On waking she was discovered to have lost every trace of acquired knowledge. Her memory was *tabula rasa*—all vestiges both of words and things were obliterated and gone. It was found necessary for her to learn everything again. She even acquired by new efforts the art of spelling, reading, writing, and calculating, and gradually became acquainted with the persons and objects around like a being for the first time brought into the world. In these exercises she made considerable proficiency. But, after a few months, another fit of somnolency invaded her. On rousing from it she found herself restored to the state she was in before the first paroxysm; but was wholly ignorant of every event and occurrence that had befallen her afterward. The former condition of her existence she now calls the old state and the latter the new state; and she is as unconscious of her double character as two distinct persons are of their respective natures. For example, in her old state she possesses all the original knowledge, in her new state only what she acquired since . . . . In the old state she possesses fine powers of penmanship, while in the new she writes a poor awkward hand, having not had time or means to become an expert.' These periodical transitions lasted for four years.'

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[1] *Mental Physiology*, Chap. XVIII.

[2] *Diseases of Memory*, Int. Sci. Series, p. 98 ff.

'Setting aside for the moment all that concerns the alternation of two personalities, it should be noted that there were found here two memories, each complete and absolutely independent of the other. Not only was the memory of personal impressions, the memory of consciousness, entirely and hopelessly dissevered, but also the semi-organic, semi-conscious memory by which we are able to speak, to read, and to write. The record does not tell us whether or no this description of memory extended to its purely organic forms—to habits (whether, for instance, the patient was obliged to learn anew the use of the hands in eating, dressing, etc.). But even supposing that this group of acquisitions remained intact, the separation into two distinct and independent groups is still as complete as the most exacting observer could desire.'

§ 37. 'A second, less complete but more common form of periodic amnesia is that of which Dr. Azam gives an interesting description in the case of Felida X., and of which Dr. Dufay found a parallel in one of his own patients. . . . . A woman of hysterical temperament was attacked in 1856 with a singular malady affecting her in such a manner that she lived a double life, passing alternately from one to the other of two states, which

Dr. Azam defines as "the first condition" and "the second condition." In the normal or first condition, the woman was serious, grave, reserved, and laborious. Suddenly overcome with sleep, she would lose consciousness and awake in the second condition. In this state her character was changed; she became gay, imaginative, vivacious, and coquettish. She remembered perfectly all that had taken place in other similar states *and during her normal life*. Then, after the lapse of a longer or shorter period, she was again seized with a trance. On awaking she was in the first condition. But in this state she had no recollection of what had occurred in the second condition; she remembered only anterior normal periods. With increasing years the normal state (first condition) lasted for shorter and shorter and less frequent periods, while the transition from one state to the other, which had formerly occupied something like ten minutes, took place almost instantaneously.'

'Such are the essential facts in this case. For purposes of special study, it may be summed up in a few words. The patient passed alternately through two states; in one she possessed her memory entire; in the other she had only a partial memory, formed of all the impressions received in that state.'

'The case reported by Dr. Dufay is analogous to that just given. During the period corresponding with the second condition of Felida X., the patient was able to recall the minutest incidents which had taken place in the normal state, or during the period of somnambulism. There was also a change in character, and during the period of complete memory the patient designated the normal condition as *l'état bête*—the "brute state."'

'It is worth noting that in this form of periodic amnesia, there is a part of the memory which is never wiped out, but which remains common to both conditions. "In these two states," Dr. Azam tell us, "the patient was perfectly able to read, write, count, cut, and sew." There was not here, as in the case recorded by Macnish, complete disruption. The semi-conscious forms of memory co-operated equally with both phases of mental activity.'[1]

§ 38. 'On examining the general characteristics of periodic amnesia, as illustrated in the cases given, we find first *an evolution of two memories*. In extreme cases (Macnish) the two memories are independent of one another; when one appears, the other disappears. Each is self-supporting; each utilises, so to speak, its own material. The organised memory employed in speaking, reading, and writing is not a common basis of the two states. In each there is a distinct recollection of words, graphic signs, and the movements necessary to record them. In modified cases (Azam, Dufay, somnambulism) a partial memory alternates with the normal memory. The latter embraces the totality of conscious states; the former a limited group of states which, by a natural process of selection, separate from the others and form in the life of the individual a series of connected fragments. But they retain a common basis in the less stable and less conscious forms of memory which enter indifferently into either group.'[1]

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[1] For fuller accounts see *Mind* No. I., 414-553.

CONCLUDING REMARKS.

§ 39. After examining some of the leading varieties of abnormal consciousness, we are in the first place impressed with the truth of the general conclusion, that nowhere in such states do we see at work any different powers from those we see in exercise under normal conditions. A further examination fails to disclose any new laws of the operation of conscious activities. What we do find in all cases is either an exaltation or a deficiency of action in some normal mode. And abnormal conditions of some portion of the nervous system correspond exactly with and are always a key to the various sorts of abnormal consciousness. But wherever there is consciousness at all it exists according to the laws of redintegration and efferent activity, has its three aspects of feeling, cognition, and volition, and exhibits the elements which our general analysis brought out. Afferent influences, or some of them, may be cut off in one case, efferent activities may be interfered with in another, feeling may be exalted or depressed, cognitive movements may be arrested or quickened, but there is always a course of differentiation and integration according to the general laws we have laid down.

§ 40. We are also confirmed in our adhesion to the doctrine that the development of mind in the individual proceeds in correspondence with the development of life. For the result of conscious movements is the organisation of experiences so as generally to conform the individual to his environment, to effect the most perfect adjustment of inner to outer relations. Therefore, when there is any interference with the normal order of working of the mind's faculties, this adjustment is disturbed and the development of life is also interfered with. In those abnormal states which are of a temporary character, no harm may be done; but in the proportion that they become permanent, they tend to the destruction of the organism. Abnormal consciousness is hence disease, and, unless the normal order is restored, the effect upon life is disastrous.

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[1] Ribot *op. cit.*

§ 41. While this is generally true, it also appears that consciousness can exist, temporarily at any rate, in such an independence of normal conditions as to raise many questions as to its ultimate capacities of existence. Sensation may be blunted as in dreams, and yet the consciousness may be very active in representation. On the other hand in the hypnotic condition, and in some states of intoxication, there is a tremendous exaltation of the sensibilities. Whether there ever can be developed any normal conditions of these high powers of the senses and of the redintegrating activities is a query of great interest in its bearings on the future of the human race. Again, under extreme morbid conditions there appear those extraordinary exhibitions of intelligence and of feeling, which make us prone to believe that the existence of our conscious selves is not bound up with the integrity of our bodily organism. Indeed, when we consider the cases of double consciousness, the wonder comes over us whether even our birth may not be 'but a sleep and a forgetting.' As we move into this region of abnormal consciousness, the darkness of the unknown or the unknowable very speedily shuts in around us, with only here and there a star to guide us on our way.

CHAPTER XLVIII.

DEVELOPMENT IN THE LOWER ANIMALS.

§ 1. THE laws of development contained in the first chapter of this Part are generalisations from all the facts of consciousness wherever found. The different phases of development which form the subject-matter of the subsequent chapters have been set forth from examination of the facts of consciousness in general, and not any one individual's consciousness or the consciousness of any class or species of animate life. It is true what has been said has related more especially to human consciousness as of paramount interest in psychology, since it exhibits the highest developments of redintegration, and since after development into the most complex phenomena has been traced, the work has been accomplished for the less complex phenomena also. We have studied the genesis of consciousness, have analysed it into its elements, have learned the factors of its development, ascertained the laws of that development, and followed it along its various lines to its most elaborate and complex results. Of course in doing this there has been no possibility of setting forth all the facts from which our inductions have been drawn, though it is certainly hoped and believed that nothing is stated which the facts do not warrant. To give in detail the data for psychological principles would require the writing of a Descriptive Psychology far larger in its proportions than the present work, and would preclude giving that attention to relations necessary for the attainment of principles, and so important to higher knowledge.

2. If we are not in error with respect to the facts of the genesis of consciousness, there is only a difference in degree between human consciousness and lower animal consciousness. The factors and laws of development of the latter are the same as those of the former. We find a great multiformity and variety of results, but a complete uniformity of law. The law of evolution is the general expression of those uniformities of modes of action which work out different degrees of mental attainment. It is no more than we must expect, therefore, that the laws of redintegration govern the exhibitions of consciousness in the inferior creation; we observe this to be the case upon examination, whenever we can make it. And since the laws of efferent activity are common laws of all animate motor action, it is apparent that in a psychological study of the brute creation we have no new principles either to seek or find. Nevertheless the various degrees of development of mental functions and capacities in species below man are of great importance to the history of the development of mind.

§ 3. Although Comparative Psychology must be said to be in its infancy, in recent years a considerable amount of scientific attention has been bestowed upon mind in the lower animals. Most recently of all, Mr. George J. Romanes has published a volume whose expressed object is 'the mapping out of animal psychology,' in order to give a trustworthy account of the grade of psychological development which is presented by each group. In this work we have the most recent and most complete exposition of the facts of comparative psychology, and from it I shall select the facts necessary for the purposes of the present chapter, themselves collated from numerous authors.[1]

§ 4. The knowledge we are able to gain of animal intelligence below man, like the knowledge we have of any other mind than our own, is inferential. But in the case of the lower animals the absence of an established and perfected means of communication with them on our part renders our inferences less certain; moreover, the difficulty of attaining certainty in our conclusions is enhanced the farther away we get from structures like our own organism, since then we have nothing by which to judge, for we are accustomed to measure likeness of function by likeness of structure. The criterion by which Mr. Romanes thinks he is entitled to judge of the existence of mind in the lower animals is the following: 'Does the organism learn to make new adjustments, or to modify old ones, in accordance with the results of its own individual experience? If it does so, the fact cannot be due merely to reflex action . . . . for it is impossible that heredity can have provided in advance for innovations upon, or alterations of its machinery during the lifetime of a particular individual.' 'I may, however, here explain that in my use of this criterion I shall always regard it as fixing only the upper limit of non-mental action; I shall never regard it as fixing the lower limit of mental action. For it is clear that long before mind has advanced sufficiently far in the scale of development to become amenable to the test in question it has probably begun to dawn as nascent subjectivity. In other words, because a lowly organised animal does *not* learn by its own individual experience, we may not therefore conclude that in performing its natural or ancestral adaptations to appropriate stimuli consciousness, or the mind element, is wholly absent; we can only say that this element, if present, reveals no evidence of the fact. But, on the other hand, if a lowly organised animal *does* learn by its own individual experience, we are in possession of the best available evidence of conscious memory leading to intentional adaptation. Therefore, our criterion applies to the upper limit of non-mental action, not to the lower limit of mental.'[2]

In referring to Mr. Romanes, I shall make use of the International Scientific Series (New York, Appleton, 1883), and the reader will understand all the page references at the lower margin to be to the pages of this edition of Mr. Romanes's work, unless otherwise stated.

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[1] *Animal Intelligence.*

[2] Introduction.

INVERTEBRATA.

§ 5. Below the mollusca evidence of consciousness is found; but very little to show how far it is developed. In Part IV. I gave some of the facts and conclusions on invertebrates (see Chap. XXV. § 9 ff.). In addition we may note that oysters taken from a depth never uncovered by the sea, open their shells, lose the water within and perish; but if kept in reservoirs, where they are occasionally left uncovered and are otherwise incommoded, learn to keep their shells shut and then live for a longer time after being taken out of water.[1] The razor fish learns to avoid salt, and yet when he apprehends danger of capture places the latter before any aversion he may have to the salt.[2] Snails seem to be susceptible of some degree of personal attachment, one having apparently remembered a sickly mate and having returned to it after twenty-four hours' absence on an exploration after better circumstances, and then after finding the same having conducted its mate thither.[3] Limpets return to one particular spot or home after browsing excursions, and show a precise memory of direction and locality.[4] According to Schneider the Cephalopoda show unmistakable evidence of consciousness and intelligence. They appeared to recognise their keeper after having received food from him.

§ 6. The most highly developed intelligence among the invertebrata is found among the ants, and of their habits we have a very large number of facts collected which go to prove this assertion. Dr. Lindsay's summary we have already given (Chap. XXV. § 9). What he says is amply borne out by later investigation. Ants undoubtedly have means of mental communication, but how this is effected we do not know. They seem to have sympathy and tender emotion.[5] As to imagination we do not find much that is satisfactory evidence, at least as to æsthetic constructiveness. Scientific and utilitarian constructions are implied in many of their most conspicuous actions. The play impulse is considerably developed.[6] Altruism is also well developed, as shown by their social organisations.

§ 7. Bees and wasps have much greater powers of sight than ants,[7] but like ants their sense of hearing seems very low.[8] Like ants, they have smell.[8] They readily are educated to a sense of direction.[8] Their memory of locality is sufficiently strong to bring

[1] 25. [2] 26. [3] 27. [4] 29. [5] 47, 48. [6] 87. [7] 143. [8] 144.

them back several years in succession to the same abode.[1] Their memory is in general comparable with that of ants, which extends at least over a period of many months.[2] They have social sympathies, but to a less degree than ants.[3] Information can be communicated among them.[4] The habits of industry and co-operation therein among bees and wasps are developed very similarly to the same habits in ants. Reasoning powers are very prominent.

VERTEBRATA.

§ 8. 'Neither in its instincts nor in general intelligence can any fish be compared with an ant or a bee[5] . . . Although the brain of a fish is formed upon a type which by increase of size and complexity is destined in function far to eclipse all other types of nerve-centre, we have to observe that in its lowest stage of evolution, as presented to science in the fishes, this type is functionally inferior to the invertebrate type where this reaches its highest stage of evolution in the Hymenoptera.'[6] 'Fish display emotions of fear, pugnacity; social, sexual and parental feelings; anger, jealousy, play, and curiosity. So far the class of emotions is the same as that with which we have met in ants, and corresponds with that which is distinctive of the psychology of a child about four months old. I have not, however, any evidence of sympathy, which would be required to make the list of emotions identical; but sympathy may nevertheless be present.'[7] (See Chap. XXV. § 8.) Most of the intellectual traits of fish are observed in connection with their increased wariness in waters much fished in subjecting themselves to dangerous situations.[8] They have also been noted in the calculation sometimes displayed in protecting the young and in securing their own food.[9]

§ 9. The general intelligence of reptiles is low as compared with birds and mammals, but conspicuously higher than that of fish or batrachians.[10] Friendship seems to be displayed, and thus of course recognition. An alligator formed a strong attachment for a cat in one instance; crocodiles have been tamed; snakes and tortoises sometimes unmistakably distinguish persons, and in one case a tortoise remembered a person to whom he had become attached, after a separation of some weeks.[11] Instances of the taming of snakes are very abundant. Instances of their remembering their friends for a period of six weeks are recorded, and also those showing a remarkable intensity of amiable emotion.[1]

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[1] 154. [2] 155. [3] 156. [4] 157. [5] 241. [6] 242.
[7] 242. [8] 250. [9] 251. [10] 256. [11] 259.

§ 10. When we come to birds we discover a very marked enlargement of sympathetic and social sentiments, together with æsthetic emotions and perceptions. The memory of birds is very well developed, and extends in the parrot to a distinct memory, and also recollection of articulate sounds.[2] They know when there is a missing link in a train of association, and purposely endeavour to pick it up.[3] All the emotions of sexual and parental relations are very obvious in birds;[4] sympathetic actions, extending to the care of the sick or wounded, are very common.[4] Those refinements of anger which are found in malice and resentment are shown.[5] Curiosity is apparent and also pride, as exhibited 'in the evident pleasure which is taken in achievement by talking birds.'[6] The predominance of the play impulse, the decorative instincts seen in the construction of bowers for sporting places and of nests also, together with obvious pleasure taken in displaying and viewing beautiful plumage; and further the delight of some birds in musical notes, all bear witness to the existence of æsthetic sensibility.[7] Many of these same evidences would seem to indicate æsthetic interest as low down as the Articulata; but it is only in birds that we have such an accumulation of proofs as to justify positive assertion. 'That birds possess considerable powers of imagination, or forming mental pictures of absent objects, may be inferred from the fact of their pining for absent mates, parrots calling for absent friends, etc. The same fact is further proved by birds dreaming, a faculty which has been noticed by Cuvier, Jerdon, Thompson, Bennet, Houzeau, Bechstein, Lindsay and Darwin.'[8] Adaptation to circumstances, amenability to educating influences in birds, indicates a high degree of intellectual and volitional development. 'The facility with which birds lend themselves to the education of the showman is certain evidence of considerable docility, or the power of forming novel associations of ideas.'[9] 'The rapidity with which birds learn not to fly against newly-erected telegraph wires displays a large amount of observation and intelligence. The fact has been repeatedly observed.'[9] There are many instances of intelligent caution and rational calculation to overcome difficulties either by birds singly or in combination. There even seems to be developed sometimes a moral sentiment leading to the punishment of malefactors. Theft and dishonesty have been punished among rooks in well authenticated instances.[1] Among birds (as all the way down in the scale of creation) instinctive action is present in great variety; appetitive action is also controlling. Selective action, as determined by individual experience, is everywhere seen in a considerably well-developed degree. The power of education by circumstances shows the conscious action and reaction of organism and environment.

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[1] 260. [2] 267. [3] 269. [4] 270 ff. [5] 277. [6] 279. 279 ff.
[8] 311. [9] 312.

§ 11. In the most intelligent mammals we meet with every variety of redintegration, and all the leading emotional and volitional states of which we have hitherto treated. Their disadvantage as compared with man seems to be the absence of an ability to form and preserve through a series an organic unity of individuals. Inasmuch as they possess no perfected mode of communication which enables them to preserve for others the results of their redintegrations, their development falls far short of that of civilised man—not so far short, however, of man in the savage state. The differences among mammals themselves are governed mainly by the respective predominances of predatory and of social habits. These are determined by their environments, and perpetuated by heredity; and are sometimes enormous as between different species.

§ 12. The horse is remarkable for docility and affectionate disposition. Its memory is good, and its powers of contrivance quite noticeable.[2] A curious emotional characteristic is its liability to become completely dominated by fear, creating sometimes an uncontrollable frenzy.[2] In cats we notice a delight in cruelty well marked.[3] Their reasoning powers are well developed, as shown in their actions to secure their prey. In one case, where a cat observed crumbs thrown out to attract birds, she would not only avail herself of the circumstances, but when a light snow fell, and covered the crumbs, she dug under the snow, brought out the bread and then watched for the advent of the birds.[4] Another cat actually obtained and scattered crumbs on the grass for the same purpose.[4]

§ 13. 'The intelligence of the dog is of special, and indeed of unique interest from an evolutionary point of view, in that from time out of record this animal has been domesticated on account of the high level of its natural intelligence; and by persistent contact with man, coupled with training and breeding, its natural intelligence has been greatly changed. In the result we see, not only a general modification in the way of dependent companionship and docility, so unlike the fierce and self-reliant disposition of all wild species of the genus; but also a number of special modifications, peculiar to certain breeds, which all have obvious reference to the requirements of man. The whole psychological character of the dog may therefore be said to have been moulded by human agency, with reference to human requirements, so that now it is not more true that man has, in a sense, created the structure of the bull-dog and greyhound, than that he has implanted the instincts of the watch-dog and pointer. The definite proof which we thus have afforded of the transforming and creating influence exerted upon the mental character and instincts of species by long and persistent training, coupled with artificial selection, furnishes the strongest possible corroboration of the theory which assigns psychological development in general to the joint operation of individual experience, coupled with natural selection. For thousands of years man has here been, virtually, though unconsciously, performing what evolutionists may regard as a gigantic experiment upon the potency of individual experience accumulated by heredity; and now here stands before us this most wonderful monument of his labours—the culmination of his experiment in the transformed psychology of the dog.'[1]

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[1] 322. [2] 329. [3] 413. [4] 419.

§ 14. Aside from the domestic animals, mammals in the wild state, and when partially domesticated or kept in confinement, display a high degree both of intellectual and emotional development. The habits of the beaver have for a long period excited wonder, both among common observers and scientific men. The sagacious cunning of the wolverine is very remarkable. Bears show much intelligence, and they, in common with many animals normally wild, are very susceptible to educating influences in the way of taming. Two instances are recorded of bears stirring water to make a current with which to bring an article of food within their reach.[2] The cunning of the fox is proverbial; that of wolves and jackals is also noticeable.[3] Elephants show much tender emotion, far-reaching memory, and great vindictiveness.[4] 'The higher mental faculties of the elephant are more advanced in their development than in any other animal except the dog and the monkey.'[5] Of course it is difficult to say how much of the powers of adaptation of movements to ends which we discern in

[1] 438. [2] 352. [3] 433. [4] 386 ff. [5] 396.

animals, especially those untamed, is due to instinct; but in many instances there is clearly evident a government by voluntary determinations according to the law of pleasure and pain. In all these cases the development of the representative powers furnishes the index to general mental development.

§ 15. In monkeys, on the whole, we find a development the most nearly approaching that of man in his lowest states.[1] Affection and sympathy are more strongly marked than in the dog.[1] A strong sense of the ludicrous, and with it a sensitiveness to ridicule, is prominent.[2] Curiosity is more strongly pronounced in monkeys than in any other animals.[3] The power of imitation is brought out in a high degree.[3] Rage, jealousy, and revenge are obvious.[4] 'Monkeys certainly surpass all other animals in the scope of their rational faculty.'[4] Chastisement is frequently inflicted on the young.[5] (Dogs and cats also maintain discipline among their progeny.) There are many proofs of monkeys acting in co-operation.[6] Vanity is apparent.[7] 'Much the most striking feature in the psychology of this animal, and the one which is least like anything met with in other animals,' is a 'tireless spirit of investigation,' involving the most patient industry, to learn of unfamiliar objects, and a most evident satisfaction in his success in making a discovery.[8]

§ 16. To sum up. There are evidences in the lower animals of every variety of perceptive redintegration, with a far greater development of special sense powers in many instances than we find in the human race. There is no evidence of reflection upon their own mental processes. Memory and recollection, that is, both involuntary and voluntary reminiscence, are well developed, and that, too, low down in the scale of animal life. Conceptive redintegration in conception, abstraction, and generalisation, is demonstrated; as is also discursive redintegration in the possession and exercise of reasoning powers. The want of a perfected language hinders greatly the production of a high degree of conceptive and discursive redintegration. Constructive redintegration to some extent is necessitated by the presence of other exercises of mental activity, but it is not highly evolved, speaking relatively to man and to other powers in animals. Inseparable and exclusive associations are obvious. The emotions of attention, as novelty, variety, monotony, surprise and wonder, all are indicated. Both self-sufficient activity and activity for ends are chronicled. Pleasure

[1] 470. [2] 476. [3] 477. [4] 478. [5] 482. [6] 483. [7] 495. [8] 497.

and pain in countless varieties are exhibited. The interests of introsusception, pursuit, acquisition, preservation, development, and perfection seem to exert a dominant influence upon animal action. We have seen also the development of sociality, sympathy, and all the sexual and parental emotions. Friendship, pity, gratitude, sorrow, and grief are not wanting. Favour and disfavour from others and from man are appreciated. Interests of general altruistic utility are not of far-reaching consequence, but still are recognisable as springs of action. Æsthetic interests we have commented upon, though they are not highly developed. Ethical sentiments are in a very rudimentary stage even in the highest animals, though a sense of shame is clearly shown; also some sense of justice, and probably some notion of ethical punishment. All the aversions are exhibited as leading characteristics in one animal or another, anger and fear in their divers forms being prominent traits in animal psychology. Finally, passing to the volitional aspect, appetite and instinct will be questioned by no one; nor will activity toward pleasure and away from pain in the individual experience. Obedience to the word of command and imitation are every day exemplified. There is also some control of feelings. As to voluntary control of the thoughts, we do not know, except so far as indicated by selective attention, of which there is plenty of proof. Desire and endurance are seen, and apparently deliberation and resolution. Expectation and belief must be postulated, and have been noted in observed cases; while effort is not wanting. Choice is a matter of common observation. Thus, after careful examination prosecuted by many observers, with the results collated and scrutinised by the most thorough and the most eminent naturalists of the age, we are forced to the conclusion which was put forward as a thesis at the beginning of the chapter—that wide as the gulf undoubtedly is between civilised man and the most intelligent of the brute creation, after all, the difference as to psychical life is wholly one of degree; and in the lower animals there is found in one stage of development or another, and in one species or another, every distinctive variety of intellectual, emotional, and volitional life.

PART VII.

COGNITIVE INTEGRATIONS.

'The process or act of knowledge is complete when it is matured into a *product* and this product itself becomes an object to the mind's future knowing. At one time the whole of a mental state becomes such an object; at another, some one element of a single state is detached from the act that produced it, and becomes endowed, so to speak, with a separate life. This product, so far as it exists, exists as a mental transcript or representation of the original, whether that original were a *subject-object* or an *object-object*. It is also capable of being recalled and of itself recalling its original.'—PORTER, *The Human Intellect*.

CHAPTER XLIX.

PERCEPTS AND RE-PERCEPTS.

PERCEPTS.

§ 1. A PERCEPT is *id quod perceptum*, that which is perceived. It is the object of presentative cognition, considered as a product of an act of presentative knowing. Percepts are indefinitely divisible, that which is perceived at a given moment being a percept and there being no limit to the divisions of time. They are always to be distinguished from sensations, though the same thing in matter, the difference being one of effect in consciousness or of manner, in which the same phenomenon is viewed. Sensations are feelings; percepts are cognitions.

§ 2. Percepts are of two general classes, *Sensational* and *Ideal*; the sensational percepts being perceptions of sensations, the ideal being perceptions of ideas, as such. Sensational percepts differ from ideal in those particulars wherein sensations differ from ideas, namely, in respect to vividness, chiefly. Sensational and ideal percepts agree in the chief common feature of immediateness; generally speaking they agree in all the qualities which distinguish presentative knowledge from representative.

§ 3. Sensational percepts may be divided into classes, according to the different varieties of sensation. In this way they may be considered as making two general divisions: Organic or Systemic Sense Percepts, and Special Sense Percepts, each of which is susceptible of division into classes exactly corresponding to the divisions of sensations, as Percepts of Digestion, Percepts of Circulation, Percepts of Sight, Percepts of Touch, and so forth; the full enumeration need not be repeated.

§ 4. Percepts generally may be divided into classes corresponding to their complexity, the divisions being those (or similar to those) given as grades of presentative knowledge. The simplest percepts are hence those which localise homogeneous sensations upon the body. From this point they increase in complexity till the representative element exceeds the other, when the name *percept* ceases to be applicable.

§ 5. Percepts are united with each other, according to the laws of redintegration, and are elaborated into compound wholes by the operation of those laws. The percepts with which the mind ordinarily deals, and which we denominate products of perception, are aggregates of associated percepts in which the representative factor is conspicuous, but which, nevertheless, have their primary attachment to presentative knowledge.

RE-PERCEPTS.

§ 6. There seems need of a name to indicate the first two degrees of representative cognitions, that is to say, those in which the representation is of simple matters of experience, as the recollection of a particular impression upon the senses, like that of a tree, a ray of light, a series of events. These are nothing more than recollections of percepts, that is representations of percepts. Accordingly, the name Re-percept is here employed to designate them. A Re-percept is a represented percept.

§ 7. Re-percepts are the simplest products of representative cognition. They are never sensational, but always ideal; they are not feelings, but cognitions; they are mediate, and are indefinitely divisible in the same manner as are percepts.

§ 8. A re-percept is not an ideal percept, though the same phenomenon of mind is a re-percept or an ideal percept according to the view taken of it; the name re-percept, however, applies solely to the cognition in its representative character. We might, to be sure, regarding the close connection of the two, say that a re-percept is an ideal percept viewed as representative, but if this were done, the value of a separate name *re-percept* would be lessened greatly, as becoming confused with *percept*; and no corresponding advantage would be gained; for it is of use to keep as sharp a distinction as possible drawn between presentative and representative knowledge, and important not to confound the two either designedly or unwittingly.

§ 9. Re-percepts, then, are distinguishable from percepts by all the characteristics which separate representative from presentative cognition. They are marked off from higher representative cognitions by their relative simplicity, and by their traceable conformity to the percepts of which they are representations.

§ 10. Re-percepts may be classified in the same manner as percepts. We may thus have Organic or Systemic Sense Re-percepts and Special Sense Re-percepts; these latter in turn may be subdivided as before. Re-percepts also may be divided into classes according to their complexity, in which they correspond to the first two divisions of representative cognitions, though undoubtedly a considerably finer subdivision may be made.

§ 11. Re-percepts are united with each other by association and form compound wholes, which are in turn united with other compound wholes indefinitely. They also are involved inextricably with percepts, that which is ordinarily termed a percept being often largely a re-percept, as in the case of perception of a solid by the eye. Our preserved knowledge of percepts is only possible by re-percepts; were it not for the latter we should not be able to say what a percept is, or indeed, that there is any percept. Our entire discussion of percepts, classification, and analysis of them is effected by means of re-percepts, combined of course with the higher products of representative knowledge.

SYMBOLS.

§ 12. There is a use to which certain percepts and re-percepts are put, which demands special and separate treatment. A percept may have its own intrinsic value as a contribution to knowledge, and it may have besides a symbolical value from the fact that it is associated with other percepts, re-percepts, or higher products of cognition as an index or indicator of the latter. For illustration, a certain gesture or facial expression may become so associated with cognitions of emotion in another, that to one's own mind whenever seen it becomes an evidence and a symbol of that emotion; when the gesture or expression appears we interpret it as showing an emotion within. So a sound of a particular character comes to stand for a variety of associations not necessarily or originally connected therewith. In this way it is possible for every cognition to be symbolical, representing the rest of the group to which it is attached. Some percepts and re-percepts, however, are so pre-eminently symbolical as to make this office their chief value. They are treated as symbols, and the world rates their intrinsic value as of little moment.

§ 13. The percepts and re-percepts which are employed as symbols are chiefly those of hearing and sight. Nevertheless inferior senses give products which are noticeably symbolic. To a blind man percepts through touch largely take the place, for all purposes, of those through sight; a person deaf and blind (and there have been such) must depend still more upon touch. Even one who is in possession of all the senses makes sensations of touch and of the lower senses to some degree symbolical. A grasp of the hand in the dark, the odour of savoury food not seen may symbolise many experiences. But relatively the inferior senses furnish symbols so little important as to deserve slight notice.

§ 14. There are two principal uses of symbols. The first is their importance as a means of communication. If there were only one sentient being, he would have no necessity for a systematic employment of symbols. But, as the contrary is the case, and inasmuch as no man's mind is open to another's immediate inspection, and since sentient beings must have regard to each other for the purposes of defence, offence, sustenance, sympathy, and love, it is absolutely required that there be some means of interpreting another's state of mind. There seems to be no other way than the one which has been adopted, namely, to make those percepts and re-percepts which are associated in contiguity or similarity indicative one of another, or of clusters of others. A smile thus means complaisance and encourages; a frown or a growl indicates hostility, and repels or puts one on his guard. A second great use of symbols is to record experience to the end of increasing knowledge, developing desirable emotions, and perfecting character. Among highly intellectualised sentient creatures, by means of symbols, vast stores of knowledge are accumulated, reduced to order, and preserved for future generations; without such indicia no high degree of intellectual progress could be reached, for, whatever the results which might be attained, they could not be perpetuated beyond the moment. In this connection may be noticed the value of such symbols as fine art makes use of for its purposes. A painting, a sculptured figure, a musical piece—all have symbolical offices to affect the emotional nature of mankind. In music there is very likely some inherent power of giving pleasure from harmonious combinations of sound; but there is also an exceedingly large portion of the delight coming from the associations of past experience which are recalled by the sounds. Still more, in painting and sculpture, the greatest part of the æsthetic effect arises from recollection or anticipation of the experiences which the works of art symbolise. Communication seems to necessitate the institution of symbols, and when they are formed they presently become instruments of intellectual and moral advancement.

§ 15. Symbols may be classified as follows:—

I. Lower Sense Percepts.
II. Simple Inarticulate Sounds.
III. Natural Sight-Percepts.
IV. Spoken Language.
V. Musical Sounds.
VI. Artificial Sight-Percepts.
    (*a*) Percepts of Products of Practical Art.
    (*b*) Percepts of Products of Æsthetic Art.
    (*c*) Written Characters.
        (1) Hieroglyphics.
        (2) Written Language.

The first of these classes needs no special explanation. It includes all possible symbolical uses of sense percepts below hearing. The second class advances us a grade. Inarticulate sounds are those cries, growls, and other vocal expressions, which emanate from the lower animate creation, from savages, and on some occasions from civilised men. They are symbols of feeling, and of such action as is naturally consequent upon the feeling. Fear, rage, love, satisfaction, pain, wonder, surprise, are exemplified by these sounds. Natural Sight-Percepts embrace physical expressions of the face, arms, and body generally, as grimaces, gestures, contortions, and also such natural phenomena apart from the volition of man of which a symbolical use is made. All natural objects may have a symbolical value. The destructive agents are especially so characterised. A comet, a dark storm cloud, a flash of lightning, are suggestive of ruin and death. Likewise the beneficent forces have a correspondingly delightful import: the sun is a symbol of life, power, and joy; a landscape, a flower, or fruit, may stand for an experience of pleasure, recalling, preserving, and extending it. The fourth and fifth classes explain themselves. The sixth general class covers sight percepts of artificial products, both of the industrial, practical arts, and of those fine arts not pertaining to other classes. In addition, there is placed by itself the highest and most complex division of all—that of written characters, to which belong both the varieties of hieroglyphic symbols and written language. In the latter is exhibited the perfection of symbolism. Here the complexity sometimes reaches a very high degree. Written characters are not only symbols of ideas and objects, but also of other symbols. A word, for instance, is symbolical of the spoken word which it stands for, the latter itself being the symbol of a thought or feeling. An abbreviation stands for a word fully written out, thus being at the third remove from the object ultimately symbolised. Symbols are heaped upon symbols to an indefinite extent.

§ 16. The fact that language is practically (though not necessarily) never absent from the movements of thought gives to the symbols of which it is composed a prime importance in the investigation of mental facts. They are the instruments by which the mind works, and it is indispensable to know the quality and uses of those instruments. The analysis of language which introduces this work has its justification now fully made out: we are here able to note the proper psychological position of language. Its unit is a word, which is a percept (or re-percept) symbolical of emotion, volition, or cognition, or all of them. Names are symbols of single cognitions, whether presentative or representative, and may be single words or combinations of words. Propositions are symbols of judgments. Discourse is a term applied to a body of language comprising words, names, and propositions, and expressing complex and connected ideas in all their multiplicity. It is recommended to the reader at this point to review the chapter found in the introduction, which explains the origin, structure, and abuses of language.

§ 17. It has been already mentioned that symbols have a value of their own independently of their symbolical character. This double aspect must carefully be regarded, or confusion will be bred. Especially is difficulty likely thus to occur in language, and in this way largely; combinations of words may be made which, though correct in form and having by themselves a meaning, fail when combined to stand for any cognition whatever. The word *circular* has its proper meaning; so also has the word *square*: but when the two words are combined the cognitions expressed by them respectively are incompatible and repugnant, so that the phrase *circular square* is devoid of significance, though grammatically considered it is correct. So the expression *infinite space* is without import; for the cognition represented by *space* is that of a limited to which another limited is again and again added indefinitely, and the word *infinite* symbolises no cognition at all, but only a negation of a cognition, since the moment it is made to stand for any cognition it stands for a limited or a finite. The proposition *matter has no extension* is not only untrue but is also meaningless, for the very cognition of matter implies extension. Similar observations may be made of the propositions, *Whatever is, is not; The whole is less than one of its parts; If all A is all B, no B is A; The same thing can at the same time both be and not be.* Much unnecessary difficulty has arisen in philosophy from omission to take note of this peculiarity of language. All trouble, however, may be avoided by bringing together the cognitions for which the words in use stand, and determining whether or not those cognitions are in any wise mutually exclusive. If they are thus exclusive, expressions which declare or imply their congruity have no import, but are mere associations of words which cannot be rendered into thought.

§ 18. It remains to be stated, before closing the exposition of this topic, that there are some cognitions of a higher and more complex character than percepts and re-percepts which also have symbolical uses; these will, in their order, be made the subject of remark in a future chapter.

§ 19. Both percepts and re-percepts may be characterised as *Singular Notions.*

CHAPTER L.

CONCEPTS AND ABSTRACTS.

CONCEPTS.

§ 1. THE concept is *id quod conceptum*, that which is taken or held together. The word is a designation of that kind of representative cognition in which a number of objects are held together in unity under a general resemblance. The expressions *general conception* and *general notion* are equivalents. Concepts are products of association. If I see a tree, my cognition is a percept; if I remember the tree seen, it is a re-percept; if, having seen two or more trees, I think of them as agreeing in certain particulars and form a notion of tree as expressive of an indefinite number of individuals having these common characteristics, my cognition is a concept. So also if, comparing trees, I find groups of them to differ in certain particulars and agree in others, and I divide them into classes accordingly, calling some *tall trees*, some *short trees*, some *green trees*, some *deciduous trees*; the particulars in which individuals of these sub-classes agree are in each case indicated by the adjectives which mark a number of individuals agreeing in these particulars, and thus mark concepts. The words *tree*, *house*, *animal*, *man*, *quadruped*, *tall*, *short*, *green*, *deciduous*, *beautiful*, *good*, *just*, and the like express concepts.

§ 2. Concepts belong to the fourth degree of representative cognitions; they are ideal as opposed to sensational; they are mediate; they differ from percepts by the general differences between presentative and representative knowledge; they differ from re-percepts by their generality and relatively increased complexity, re-percepts being individual and singular.

§ 3. In actual experience concepts occur mingled with percepts and re-percepts. They begin to be formed at a very early period. If in early infancy the eye strikes various articles of clothing having a white colour, the child unites in association the different pieces by their common attribute of whiteness, and thus forms a general notion of white which connects itself with any new object, as a white house, which is presently seen. When the house is remembered, with this re-perception of the object is reproduced in the cognition its whiteness; with this comes the recognition that the object is similar to various other objects in this particular of whiteness. So when a pain is remembered, associated with the representation of that specific experience recurs the cognition of its similarity to a number of other experiences; I recognise it generally as a pain. In the perception of an orange, by means of general conceptions, I identify it as yellow, as spherical, as having an under surface corresponding to the upper, as being large or small, rough or smooth, in fine as being an *orange*.

§ 4. Every concept may be viewed with reference to the number of objects which it includes, or its *Extension*; and every concept may be considered with reference to the number of attributes attached to it; or its *Intension* (or *Comprehension*). The concept *man*, in its extension, includes all individual men; in its intension it takes in all the attributes which make up the notion of humanity. The concept *white*, in its extension, covers all white objects, and has for its intension the attribute *whiteness*. The extension of a concept has been also called its breadth and its sphere; the intension, its depth or matter. In concepts the extension and intension vary inversely; the greater the extension the less the intension, and the converse. *Man*, as compared with *white man*, has a greater extension, because it includes a greater number of objects; it has a less intension, because *white man* includes the attributes of *man* and of *white objects* in addition. But *man*, as compared with *animal*, has a less extension because including a less number of objects, and a greater intension because it includes the attributes of *animal* and of *man* in addition. That is to say, in other words, that the greater the number of attributes involved in a concept, the less the number of objects possessing the whole of them; and, conversely, the greater the number of objects the less the number of attributes pertaining to them all. In ascertaining the extent of a concept actual individuals are seldom considered, that is, division is not carried to its limit. The concept *animal*, for instance, includes mammals, birds, reptiles, fishes, etc., each one of these names marking not an absolute individual but a concept of lesser generality. Even in the simplest cognitions, the simplicity is only relative; instead of indivisible singulars we find smaller aggregates of generals. Where this process of separating into lesser concepts takes place, the extension is really diminished and the intension increased by adding new attributes. This saves a laborious enumeration of particulars, even if it were practicable to go over them all.

§ 5. In respect to their extension concepts may be developed into serial orders or classes according to their generality. If we take the name of an individual, as *John*, for a starting-point, we may construct a series like the following:—

John,
Englishman,
Man,
Mammal,
Animal,
Organised Matter,
Matter,
Substance,
Being.

From a starting-point of low generality we move to a concept of the highest generality. Relative generality and speciality are indicated by the terms *genus* and *species*. From the basis of *John* as an individual, *Englishman* is the species, and *Man* the genus. Taking a wider reach of relations *Man* may be taken as the species and *animal* as the genus; in which case, according to the language of the logicians, *Englishman* is the *subaltern species* and *mammal* the *proximum genus.* In the scale of generalisation the widest in extension is the *summum genus*; the lowest or narrowest, the *infima species*; neither of them is absolutely fixed, but both depend upon the extent of the scales. If all things in the universe be taken, still the *infima species* cannot be determined with rigorous certainty, though *being* may be regarded as the *summum genus.* The intension of the *summum genus* is at a minimum; that of the *infima species* is at a maximum. Any group of things may be called a genus if it be made up of two or more species. A species is any class which is regarded as forming part of a next larger class. A class may be both genus and species according to its relations. The relations of concepts in a series of extension is also expressed in a different set of terms, as follows: One concept is said to be *subordinate* to another (which is called its *superordinate*) when the former is included within the extension of the latter: two or more concepts are *coördinate* when each excludes the other from its extension, but both go together to make up the extension of a third to which they are co-subordinate. One concept is said to be *co-extensive* with another when each has the same number of subordinate concepts with the other. Concepts intersect each other when their spheres of extension intersect, and exclude each other when no part of the one coincides with any part of the other.

§ 6. Classifications in similar manner are made of the attributes which constitute the intension of a general notion. Concepts may be subordinate and superordinate in intension; they may be coördinate, exclusive or intersecting. The remaining three of the five predicables (*genus*, *species*, *differentia*, *proprium*, *accidens*) ground their differences upon the intension of concepts. Those attributes which, taken together and added to the intension of the genus form the intension of the species, are termed the *differentia.* If the concept man includes all that is included in *animal* and *rational* besides, the latter is the differentia. Again, those attributes which are common to the whole class, but not necessary to distinguish that class from others, are embraced under the name *proprium.* That three internal angles of a triangle are together equal to two right angles is a proprium of a triangle. Still again, those attributes which are entirely accidental, which belong to a class but which may, or may not, belong without affecting the other qualities, are characterised by the name *accidens*. The size of a house is an accident; so is the colour of a horse or dog. *Separable accidents* are those which are sometimes actually found absent from a class; *sitting* is a separable accident of the class *man*; *Virgil resides in Rome*, states a fact which was a separable accident of Virgil. *Virgil was born in Mantua*, expresses an inseparable accident of Virgil. *Inseparable accidents* are those which never are found absent, though, so far as we can judge, they might be, or might have been absent, without altering the class. It may be remarked that the terms *genus* and *species* apply equally to divisions in intension. The genus, species, and differentia were considered by the Aristotelian logicians to be of the essence of the subject.

§ 7. A distinction is sometimes drawn which applies to concepts (and which has been extended also to percepts) between *First* and *Second Intentions*. A concept which embraces directly particulars of presentative experience, as *man*, *horse*, *ship*, *tree*, is said to be of the first intention; a concept which by a higher generalisation has first intentions for its proximate particulars and views these intentions in relation to each other, is of the second intention, as *genus*, *species*, *accident*. The distinction has been thus expressed: first intentions are objects in relation to consciousness alone, second intentions are objects in relation to other objects in consciousness.

§ 8. A natural distinction seems to run through concepts, between those which are marked by adjectives generally and those marked by substantives. The concept represented by *man* is a concept in which the attention is more particularly called to objects in extension, while the attributes connoted by the name are less prominently before the mind. On the contrary, when the name *white* is used a concept is evoked in which the intension is the more conspicuous. Of course *white* has no meaning except with reference to some object, but the object (in extension) is of less moment than the attribute (object in intension). Concepts of the former character may be called *Concrete Concepts*; those of the latter *Abstract Concepts*. Examples of the former may be found in any series of concepts in the order of extension. All those given in the series in § 5 are of this class; the latter division is exemplified in adjectives, as *just*, *faithful*, *true*, *large*, *useful*.

The relation which the two bear to each other may be exhibited in the following table:—

Man.	*House.*	*Cloud.*	Cloth.	
0	0	0	0	White.
0	0	0	0	Beautiful.
0	0	0	0	Dark.
0	0	0	0	Magnificent.
0	0	0	0	

Under the concepts *man*, *house*, *cloud*, *cloth*, we have ranged a vast number of particulars in extension represented by the perpendicular lines. Some of the objects under *man* agree with certain objects under *house*, *cloud*, and *cloth* in the particular which we term *whiteness*; their agreement is marked by a cross division denominated that of *white* objects; so also are formed the succeeding cross classes, *beautiful*, *dark*, etc., indefinitely. The extension of the concept white comprises all white objects, as *cloth*, *cloud*, *house*, *man*, and so forth; its intension is the attribute *whiteness*. It will be noticed that abstract concepts are based on single points of community, that is to say, the intension is always taken as one. The intension of *magnificent* is expressed by *magnificence*, which is regarded as a single attribute, although it may be analysed and separated into various other attributes, as *largeness*, *beauty*, *grandeur*, *sublimity*, which enter into it and make up more or less completely its constitution. The concept *virtuous* has *virtue* for its intension, which is separable into *justice*, *temperance*, *honesty*, *chastity*, *fortitude*, and many others, but is nevertheless taken as a whole and thus regarded as singular.

§ 9. Differences are observable in concrete concepts according as they are composed of individuals which are items of presentative knowledge or of individuals which in their unity are representative; in other words, according as their original proximate components are external realities or unrealities. The concept of a horse in this particular differs from that of a *hippogriff*; that of a *maiden* from that of a *mermaid*. This is a distinction applicable only to the extension of concepts, for no attributes have corresponding external realities. Abstract concepts may include in their extension both real and fictitious particulars; *dark-coloured* might apply equally to a horse and a hippogriff; so that abstract concepts could not properly be made the subject of a division of the character we are now considering. Some abstract concepts, however, are derived from, and applicable in fact only to, fictitious objects, as *Briarean* referring to a being having a hundred hands; but there is nothing in the concept itself which would forbid its being applicable to an existing being; its actual reference to a non-existing creature comes from the concrete extensive element of the concept. Upon these considerations we may divide concepts into *Real* and *Fictitious*, the former including those concrete concepts whose particulars are external realities, the latter comprising those whose particulars are non-realities. If this classification be esteemed to have relevancy to abstract concepts, we may say that they may be either wholly fictitious, or both real and fictitious. The concept *white* as to its intension is fictitious; as to its extension it may be either real as when applied to horse, or fictitious as when applied to *centaur*; the concept *Briarean* is fictitious throughout.

§ 10. From the great multitude of particulars or individuals usually entering into a concept it must needs be very indefinite unless some process of consolidation, integration, or limitation takes place. Leibnitz, in his division of knowledge into clear or obscure, confused or distinct, adequate or inadequate, apprehended and expressed this fact. Concepts primarily are clear and distinct when their ingredients are few in number. The mind has simply to recall the individuals composing the concept, and if the memory is good the concept is correspondingly clear. As the number of those individuals increases, however, the difficulty of recalling them all is enhanced, and a mass of confusion results. This confusion is cleared up by a process of construction and symbolising, or of the latter alone. Whatever association brings up the concept evokes the cognition of one or a small plural number of individuals, which are either remembered as wholes or constructed out of remembered parts, and with which is associated the idea that there is a number of objects not definitely recalled which are similar to the individuals before the mind in the particulars characterising the concept. The longer the mind entertains the notion, the more the resembling individuals are brought up, the more completely the points of resemblance are noted; the typical individual is modified in construction so as to harmonise with the greatest number of resembling individuals, and the concept grows definite and clear. Or, if the cognition be sufficiently retained, several individuals may occupy the position of standards, the thought passing from one to the other. When we think of *man*, we remember a particular individual man, or imagine one; or the mind runs over the representations of several men, after which it rests content with the idea of an indefinite number of men about the same as those ideally presented. So with the notion *white*; a particular white object, as *snow*, is remembered or imagined, then another like it, then another, till presently the mind adds the thought of a vast aggregate of objects substantially like these, and ceases its effort; it may, indeed, pause and add the general extension after entertaining the cognition of a single individual. Where there is the recall of a certain individual the process is of re-perception and symbolising, otherwise of construction and symbolising. In either case one stands for many, and around the one definite is gathered a multiplied indefinite assemblage of resembling objects. With *white*, if (again to use the common example) snow is recalled, snow and its properties are taken to symbolise all white objects. When the concept *good* is evolved, we think of two or three good actions, or three or four persons whom we approve, or perhaps only one, and these stand in our minds for the time being for all good things, deeds, and persons whatsoever. Unless a concept had the element of definiteness coming from the representation of one or a few individuals to symbolise all, it would only be a confused blur in the mind, not attaining enough consistency to be of the slightest value for knowledge; in fact, scarcely being knowledge at all. Of course, at different times and with different persons, different objects are taken as symbols, whence it results that the idea conveyed by the same concept name is seldom or never the same in the minds of two persons, nor twice alike in the same person, though in the latter case the force of acquired association may make the reproductions from time to time substantially identical. With different persons, and with the same person at different times, *white* brings up the colours of polished white marble, of linen, of a house, of paper, of a blonde complexion, of sand, or of silver—embracing different shades, and having altogether different associations. Very prominently is this fact seen in the ideas of moral qualities: *honest*, *true*, *virtuous* have a great variety of meanings; so various, indeed, that we have difficulty in fixing any common signification at all; and who would venture to declare what another had in mind when he made use of any one of these or similar adjectives? Out of this disagreement and mutation springs much of the imperfection and confusion existing in knowledge.

§ 11. The formation of a concept implies the establishment of limits therefor, and hence implies something outside of the concept. In making a general notion we divide the universe into that which is included under the notion and all else. But how, it will be asked, does the concept stand when it is a *summum genus?* Take the concept *universe* itself, and what is its character, and what are its relations? If we embrace everything in the concept, is there anything outside? Paradoxical as it may seem, it is still true that we have, even for such concepts, correlative concepts in contraposition thereto. In forming a concept of the highest generality, as *universe*, we set over against it a general notion of all that is not included in universe; in other words, a *not-universe*. This we are forced to do by the constitution of our minds. If we did not at the same time generalise a *not-universe*, our concept *universe* would have no limits, would be undefined, would be no concept at all. When, however, we inquire of what particulars the concept *not-universe* is composed, we find, since we have already exhausted all particulars in the concept *universe*, that the former is nothing but a duplication of the latter; to give the former meaning some particular must be represented to symbolise it which belongs under universe, and this particular itself stands for a multitude of objects which all are properly included in *universe*. Similar observations with the concept *being* reveal an implied *not-being*, which is nothing but a repetition and equivalent of being. Similarly every *absolute* is a *conditioned*, every *infinite* a *finite*. We are here grounded upon fundamental and ultimate antinomies of the mind which cannot be reconciled. That they exist is evident from mental facts; that we cannot get beyond them is equally clear from the same facts. The principles of redintegration explain in what manner these effects occur; it is a natural tendency of the mind that experiences repeat themselves in idea, and when we essay to bring all things under one cognition we only raise before our minds still other and other things beyond. In concepts of lesser generality the contradiction does not appear; the correlative negative concept is symbolised by anything outside of the positive. Thus, *not-tree* includes *houses*, *men*, *grasses*, *birds*, *leaves*, *stones*, etc., any one of which may be taken to symbolise the rest. The conclusion which is evident from the inability to form universal concepts not involving contradiction is that of the relativity of all knowledge whatsoever.

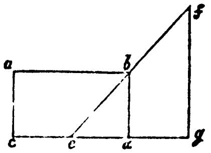
§ 12. Though all concepts are thus relative, there are some so closely related as to be in reality double concepts, the half of which has no meaning and is never found without the other half. Such are the notions expressed by *father and son*, *husband and wife*, *greater and less*. They differ from higher correlatives as *being* and *not-being*, not merely in the degree of generality, but also in the facts that they are constantly and uniformly represented together, that they are more frequently employed in connection with each other, and that their concreteness and speciality give them a greater definiteness. In *being* and *not-being*, the *not-being* is less dwelt upon and less used than the *being*; while in *father and son*, the one half is as much employed as the other, and the two equally are dependent upon concrete positive objects, from which the generalisation is not very far removed.

§ 13. The process by which the extension of a concept is developed is called *division*; that by which the intension is explicated is denominated *definition*. The forming of concepts is classification; every concept is a class, and every class is a concept or aggregate of concepts. Classes in extension are technically divisions; those in intension, definitions.

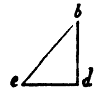
ABSTRACTS.

§ 14. An Abstract is *id quod abstractum*, that which is removed, prescinded, or drawn away. It is the notion or idea of an attribute considered by itself in its own unity, apart from the concrete objects with which it was originally connected. The cognitions represented by the words *truth*, *justice*, *whiteness*, *usefulness*, *corporeity*, *space*, *colour*, *to live*, *to see*, etc., are abstracts. The process of their formation is as follows: When two or more objects are compared, an association is made of certain points of resemblance. In this association the concrete objects may be held before the mind as objects agreeing in the similar particulars, or there may be a closer and more conspicuous union of the similar points into a common attribute, by which the attribute assumes a prominence and vividness, while the concrete objects fall away and seem to be lost sight of. The former is the case of the ordinary concept, the latter that of the abstract. A piece of paper and a wall are seen together; both of them are white. If we can suppose the colour *white* never to have been experienced before, we should have an association of these two objects by the common point of agreement; we might name the objects *white*, or, fixing the mind upon the common feature alone, we might denominate the latter *whiteness*; we should then have formed a concept *white* and an abstract *whiteness.*

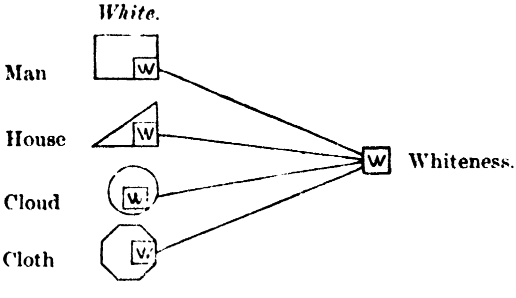
§ 15. The manner of the formation of abstracts is illustrated in the following diagram :—



Let *abcd* and *efg* be two objects which are found to have *bed* in common. The whole figure *abfgc* then may represent a concept whose intension is *bed.* Removing all else but the common portion, we have an abstract *bed.* This abstract has as its ground both *abcd* and *efg*, that is, a portion of both ; the portion of *abcd* taken coincides exactly with the portion of *efg* ; the abstract *bed* then takes the common portion of *abcd* and *efg*, and disregards the rest of the objects.



Where the concept and abstract are formed from a number of individuals, the process may be thus represented, viz. :—



The various objects *white man*, *white house*, *white cloud*, *white cloth* are different in many or most respects, but agree in the mark *whiteness*—$\boxed{W}$. Whiteness is the point of coincidence. Holding in mind the concept *white* we retain the several objects, *man*, *house*, *cloud*, etc.; but concentrating the attention upon the common property $\boxed{W}$ we consider that alone, leaving out all the rest of each of the objects, *man*, *house*, *cloud*, etc. This common property—*whiteness*—is the abstract, which we prescind from the individual objects.

§ 16. The name of an attribute, therefore, stands for a mental image, which is a relict of various concrete objects agreeing in that particular which is left remaining. Where the particulars from which it takes its rise are few and distinct, the ground of the abstract is properly a re-percept, or a portion of a re-percept separated from its surroundings; but when, as is most generally the case, it was created out of a multitude of individuals generalised, the mind constructs a type which is the *fundamentum* of the abstract. Thus *whiteness* is usually symbolised in the mind by a constructed white surface, *corporeity* by a solid, *justice* by some imagined action. Frequently there is only a confused indistinct notion attached to the mere word itself; often the name suffices to evoke an emotion which has accompanied former cognitions of that which is the base of the abstract, without those cognitions being restored to any degree of definiteness. Orators in declaiming about *honour*, *glory*, *virtue*, can by the words themselves awaken in their auditors the same feeling which an *honourable*, *glorious*, or *virtuous deed* fully cognised would stir up; but without any clear notion being present in the minds of those hearers of anything except the words *honour*, *glory*, *virtue*.

§ 17. Abstracts are mediate cognitions, not immediate; ideas not sensations; of the fourth class of representative cognitions; differing from percepts by their representative character; and usually differing from re-percepts also, in having no directly traceable connection with correspondent presentative experience.

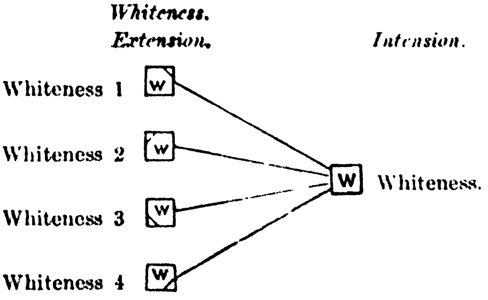
§ 18. Abstracts are formed from the very earliest period of the mind's existence. It would seem that they are developed simultaneously with extensive concepts. If objects are united in thought by a common property, the recognition of that property as a distinct whole would, so far as we can determine, take place as soon as the objects are brought together. The abstract certainly is necessary to a classification in the order of intension. The logical order of formation would seem to be

Extensive concept . .	Man.
Abstract	Rationality.
Intensive concept . .	Objects possessing rationality.
Abstract concept . .	Rational.

But it cannot be said that we actually are able to group objects together so as to form a concept *man* in the order of extension without noting the particular *rationality* in which they agree. Neither can it be said that we have any notion of *rationality* till two objects are grasped together in mental comprehension. Questions as to the order of evolution of these cognitions are profitless, for all arise so nearly together as to be parts of the same cluster; they are twins or triplets whose relative priority of advent to the light is not determinable unless an observation is made and a mark placed at the time of birth, which observing and marking process we are not well able to perform in the accouchement of ideas.

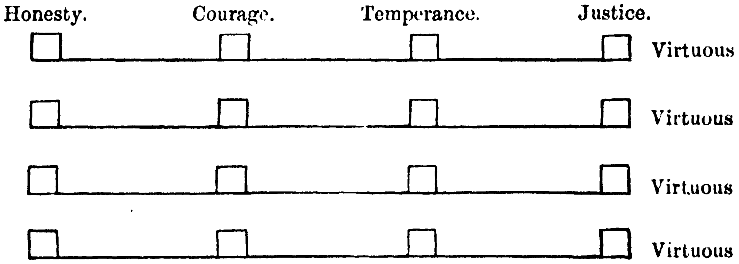
§ 19. Abstracts may themselves be generalised. Let us suppose a mind to have formed for the first time the idea of whiteness from having observed together two white objects. If then the person encounters a third white object, he recalls the two first seen or the attribute *whiteness*, and identifying the third object with the first two, or with so much of them as is recalled in the attribute, he recognises the point of resemblance between the second and third to be similar to that between the first and second; the latter constituted whiteness in the first instance; the former is whiteness in the present case; the first is one whiteness, the second is another whiteness. The presence of a fourth white object makes a new similarity; a fifth establishes still another, and so on indefinitely. So that under the word *whiteness* we have a synthesis of an indefinite number of resemblances. In these resemblances there may be differences; the common quality of whiteness which unites *man* and *house* may be somewhat unlike that which joins *cloud* and *cloth*; at different times the whiteness in which *cloud* and *cloth* agree may be different; every new experience and identification of anything as white makes a modification of the notion *whiteness*. Thus it appears that while, if we could go back to the genesis of the abstract, *whiteness* could be singular, as a fact the multiplication of experiences makes it general. The same line of remark would apply to *rationality*, *charity*, *goodness*, and all abstracts. Allowing the truth of this view, a division may be made of this class of cognitions into *singular abstracts* and *concept* or *general abstracts*. Singular abstracts are those which have been formed for the first time by a simultaneous comparison of objects co-existent; to these may be added those which are always applied and attached to the same object without variation, if any such exist; all others are concept abstracts. For the sake of formal completeness and accuracy necessitated by the fact that every abstract in every mind is at some period singular, the division of singular abstracts may be maintained; but those with which we deal in treating of abstracts which are preserved as products of thought and subjects of analytical examination are all concept or general abstracts.

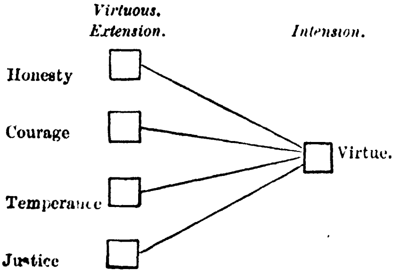
§ 20. There is presented now the question: What is the intension of a concept abstract? If *whiteness* embraces *whiteness No.* 1, *whiteness No.* 2, *whiteness No.* 3, etc., these become objects in extension composing the general notion *whiteness*; what is left to constitute the intension? In order to solve this problem, it will be necessary to recur to what takes place in the formation of the abstract. When an object appears to the mind presentatively the phenomena are thought together in a common ground; a substance is posited with which the different sensations, as colour, weight, hardness, are connected, on their objective side, as attributes. We think of no attribute without a substance, no substance without an attribute. When two objects have portions coinciding in resemblance and thus forming a concept, the portions which agree, agree in attribute; but inasmuch as no attribute can subsist without a substance, a substance is subsumed under the common attribute; so in the next case where a similar attribute is noted; so in the next, and so on. Thus, to resume the example, the abstract *whiteness* is both substance and attribute; there is no separate name for the two. In the case of *white* we have by the addition of a noun, without which the expression of the cognition is incomplete, one name expressive of the substance and one of the attribute, as *white house*, *white cloth*, *white thing*; but for the abstract we could only say *substance-whiteness* and *attribute-whiteness*. If we had other particulars upon which the abstracts might be compared and differences established, we might distinguish by those particulars, but we have peremptorily removed all save one; that one is an attribute to which by the laws of the mind we are forced to assign a substance; the attribute is a *thing* which is both substance and attribute; but if we express the attribute part by any other name than *whiteness*, we introduce a *new* substance and not that which is the substance of the attribute under consideration; we pass away from the latter entirely, while if we characterise the substance part by any other name we introduce other phenomenal particulars (since we cannot know a substance except by some attribute), whereas we postulated that the particulars remain constant. We are hence foiled in every attempt to find any other intension than *whiteness* for the abstract *whiteness*. We are accustomed to declare, therefore, that abstracts have no intension. Strictly speaking they have intension, if they are general, but an intension expressed only by the name of the attribute itself. The abstracts agree in that which is the attribute; they differ by the presence of that which is *not* the attribute. We characterise the points of agreement (which constitute the intension) only by the name of the abstract; the points of difference (by which we are able to develop an extension) are marked by any thing that will serve to make a separation. Thus we may explicate *whiteness* by enumerating in the order of extension, *whiteness No.* 1, *whiteness No.* 2, *whiteness No.* 3, etc.; or *milky whiteness, marble whiteness, dull whiteness, polished whiteness*, etc. In generalising simple concrete objects we have differences primarily and agreements secondarily; we assemble and unite the agreements which thus together form the intension, leaving the differences to mark the extension; on the other hand, in generalising abstracts we have agreements primarily and differences secondarily; we mark the differences and place them in an order to give the extension, leaving the agreements to constitute the intension. But since there is really no intension which is other than the attribute itself, and only by a subtlety of thought can we detect it at all, and it is of no separate use or character when detected, we can consider and treat all such abstracts as without intension unless there be something more than has been thus far noticed. The following diagram may serve to make plainer what has been said in this connection:—

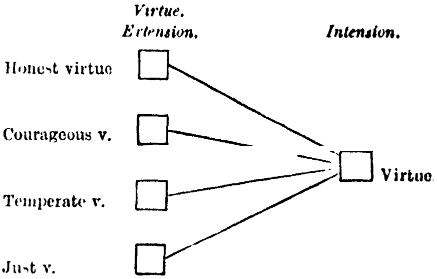


The differences are seen to be those of extension, the agreement to be in that which gives name to the abstract, and this agreement constitutes all there is of the intension; for the latter we are invariably thrown back directly upon the attribute itself.

§ 21. But frequently there is something more than has been noticed; some abstracts have an intension capable of separate denomination. Such are those out of which higher abstracts are developed. It is observable, for instance, that *honesty*, *courage*, *temperance*, *justice*, have certain points of agreement, which may be marked by the term *virtuous*; out of which is prescinded the abstract *virtue*. *Virtuous*, then, is an intension of *honesty*, *courage*, etc., and *virtue* has for its extension *honesty*, *courage*, *temperance*, and so on. The following illustration may be useful:—





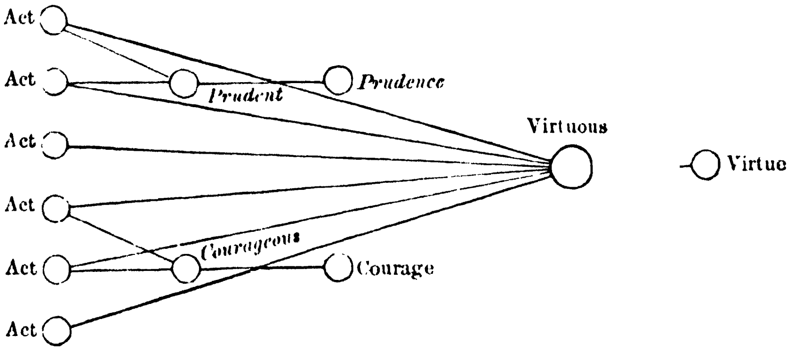


It will be noticed that here, in contrast with the generalisation exhibited in § 8, *all* the particulars constituting *honesty*, *courage*, etc., have the mark *virtuous*; we do not say *virtuous honesty* (except to indicate degree), but *honesty is virtuous*. The completion of the process of forming the higher abstract is given in the two lower figures, and that process is but a repetition of the one exemplified by the figures in §§ 15 and 20. *Honest virtue* is equivalent to *honesty*, *courageous virtue* to courage, and so forth.

Sometimes we are unable to trace an intermediate abstract-concept, but the mind seems to leap from one abstract to another. From *whiteness*, *redness*, *yellowness*, etc., we derive the higher abstract *colour*, and we should hardly think of interpolating an adjective *coloured*; nor should we be inclined to regard *coloured* as being the intension of *whiteness*, *redness*, etc.; we should rather say *colour* was that intension. More strikingly is this integration seen in case of the abstracts *pastness*, *presentness*, and *futureness*; *time* is their synthesis, and there is nothing between them and the higher abstract upon which the mind rests.

§ 22. A query may be raised whether the higher abstracts are formed from other abstracts, or are formed independently of them from concrete particulars. If the latter be the case, the higher and lower abstracts having been formed separately might afterwards be found to intersect and coincide, and thus become connected in association.

In the diagram we have as particulars, sundry actions; the mind may at one time generalise a portion of them into a concept



expressed by *prudent*, and thus form the abstract *prudence*; it may also generalise a portion of them, as *courageous*, giving *courage*, and so on; or it may generalise a larger number of them under the concept *virtuous*, and arrive at the abstract *virtue*, without the aid of the inferior abstracts *prudence*, *courage*, etc. The true solution of this question probably is, that higher abstracts are formed in both ways. While sometimes such a course may be taken, it does not seem probable that the mind always goes back to concrete particulars to make its generalisations; but, on the contrary, that it avails itself of generalisations and integrations already made and passes from them to higher ones. Certainly there is very often no conscious traceable reference to particulars in the concrete, although of course concrete particulars are always implied as ultimate foundations.

§ 23. Every abstract can be rendered into its corresponding concept, based upon concrete particulars, and these particulars alone have external reality; an abstract has no meaning without a reference to those experiences that are the concrete foundations upon which these high and sometimes fragile structures are built. Hence the mind is perpetually running back to concrete particulars for verification. *Whiteness* very readily is run into *white*, and *white* referred to some particular objective experiences. *Coldness* becomes *cold*; *goodness*, *good*; *jealousy*, *jealous*; *time*, *past*, *present*, and *future*. The concept has a closer relation to the concrete particulars, and brings them up more directly upon occasion, and all abstracts have parallel concepts. But not every concept has a corresponding abstract to which a name is given. The use of abstract names depends upon necessity and convenience, and often there seems to be no need for employing the abstract in the process of thought, or the mind has not advanced to the stage of integration of its products which develops a particular abstract into distinct form for preservation. There seems to have been abundant use for an abstract of which *man* is the concrete concept; but there is no word in English to express the corresponding abstract of *dog*; *canininity* or *dogginess* would sound strange to our ears. To essay the expression of an abstract of *anthropomorphous* would only result in a clumsy aggregation of syllables.

§ 24. Abstracts are the highest and most complex products of generalisation of single cognitions. There seems to be no limit to which they may be carried, but their construction, high development, and employment, are regulated largely by the frequency with which the concretes upon which they are based are represented to the mind, and by the relative importance of the place which the latter fill in mental operations. Abstracts are exhibited in actual thought with concepts, percepts, and re-percepts, in great variety of alternation, conjunction, composition, and integration.

§ 25. To recapitulate, in conclusion, the classifications of this chapter, we find that concepts are General Notions, and are

Concepts in Extension, or Concepts in Intension.
Concepts of the First Intention or of the Second Intention.
Concrete Concepts or Abstract Concepts.
Real Concepts or Fictitious Concepts.
Double Concepts (or relatively Single Concepts).

Abstracts are attributes considered in their individuality, and are Singular Abstracts or Concept Abstracts; and the latter are

Concept Abstracts with Intension, or Without Intension.

Concept Abstracts are also concepts, but having marks distinctive enough to warrant their being ranged apart from other concepts.

§ 26. The products now examined may all of them be embraced under the term Notion. A Notion is a single aggregate cognition (or product of cognition) forming a unit of knowledge. We are now to consider dual aggregate cognitions, in which notions are compared with each other, and pronounced to agree or differ.

CHAPTER LI.

JUDGMENTS.

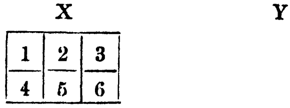
§ 1. A JUDGMENT is a cognition that two or more objects before the mind agree or differ. Judgments are expressed by Propositions. Inasmuch as every cognition is a cognition of agreement and difference, it appears that judgment considered as an act is a primordial cognitive act. Cognising agreement and difference, however, is not all of cognition; the term judgment refers to that part of it considered prominently or primarily. Judgments as products of cognition are the representations of cognitions of agreement and difference. Judgments as acts are both presentative cognitions and representative.

§ 2. All the elaborations of knowledge are the results of acts of judgment. Re-percepts, concepts and abstracts all imply and are constituted of judgments; judgments form the warp and woof of knowledge. The aggregations of associated perceptions to form new singulars and to form general notions are alike permeated with judgments. The earliest and the latest, the simplest and the most complex experiences involve judgments.

§ 3. The most general division of judgments is into Explicit and Implicit. Explicit judgments are those in which the cognition of agreement or difference is explicit, the two objects compared being kept distinct, and the relation between them being apprehended explicitly. Implicit judgments are those involved in cognitions in which two objects compared have become fused, their distinctness lost, and the cognitions more fully integrated. This distinction is a psychological one, and must not be confounded with a distinction between express and implied propositions. For instance, when Napoleon first beheld Moscow from a distance, he exclaimed, 'Lo! the celebrated city of the Czars.' The judgment which he formed in his mind was an explicit one; the language used, however, implies a proposition, but does not indicate necessarily an implicit judgment. When an object arrests my attention and I exclaim, 'A bird!' the judgment by which I identify the object with the class bird is explicit; but the cognition *bird* is made up of numerous implicit judgments. Concepts and percepts contain implicit judgments. The object of knowledge is in these cases a single unified cognition; in explicit judgments there are two separated cognitions compared. Concepts have been stated to be contracted judgments, and judgments expanded concepts. The same thing might be said of percepts, re-percepts, and abstracts, or of any analysable product of cognition. In treating of judgments as judgments we deal with those which are explicit.

§ 4. Of the two cognitions between which an agreement or difference is cognised that from which the mind moves is termed the *subject*; that to which it moves is termed the *predicate*. The *copula* relates entirely to the expression of the judgment in language. The subject may be precisely coincident with the predicate, in which case the cognitions may exactly coalesce; as *All X is all Y. A triangle is a figure having three sides and three angles. The just are (all) the holy.* Let X represent the subject and Y the predicate in the subjoined diagram in such a case as now under consideration. X is applied to Y and the two coincide exactly.

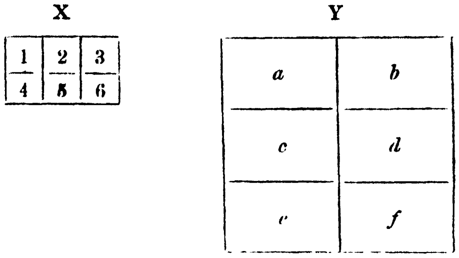
FIG. 14.



The small figures in X and the small letters in Y indicate parts into which X and Y may be divided. It is evident that a judgment that *All X is all Y* also implies a judgment that *All Y is all X*; also that *Some X is some Y*, and *Some Y some X*.

The subject may coincide with an indefinite portion of the predicate, as *All X is some Y, All men are animals*, in which case (fig. 15) X coincides with some indefinite portion of Y as *a, b, c, d, e*, or *f*.

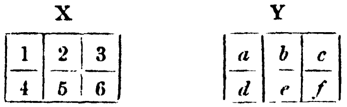
FIG. 15.



It is also evident in such a case that *Some Y is all X*, and also that *Some X is some Y*, *Some Y is some X.*

An indefinite part of the subject may coincide with an indefinite part of the predicate, as *Some X is some Y*, *Some metals are brittle substances.* In fig. 16 an indefinite part of X, as 1, 2, or 3, etc., coincides with an indefinite part of Y, as *a*, *b*, or *c*, etc.

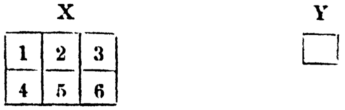
FIG. 16.



It is equally cognised that *Some Y is some X.*

A part of the subject may coincide with the whole predicate, as *Some X is all Y*, *Some stars are all planets.* In fig. 17 an indefinite part of X, as 1, 2, or 3, coincides with all Y.

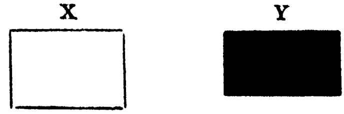
FIG. 17.



In this judgment we judge also that *All Y is some X*, or *Some X is no Y; Some X is not some Y.*

These four modes of coincidence respect modes of agreement. Judgments of difference may be found in modes exactly corresponding. The whole subject may disagree with the whole predicate, as *No X is (any) Y*, *No stones are animals.*

FIG. 18.

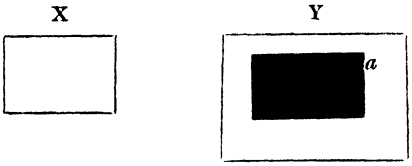


This judgment implies also the judgment that *No Y is (any) X*;

that *Some X is not Y;* that *No Y is some X; Some X is not some Y; Some Y is not some X.*

The subject may be judged to disagree with part of the predicate, as *No X is some Y, No apples are stones.* In fig. 19 disagreement is indicated between the whole of X and an indefinite part of Y, as *a.*

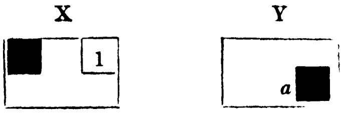
FIG. 19.



This judgment implies also that *Some Y is no X; Some X is not some Y; Some Y is not some X.*

The subject in part may be judged to disagree with the predicate in part, as *Some X is not some Y, Some apples are not (some) stones.* In fig. 20, an indefinite part of X, as 1, disagrees with an indefinite part of Y, as *a.*

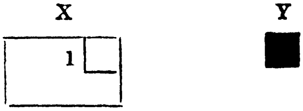
FIG. 20.



This judgment implies that *Some Y is not some X.*

The subject in part may be judged to disagree with the whole of the predicate, as *Some X is no Y, Some apples are not (any) stones.* In fig. 21, a part, as 1 of X, disagrees with Y entire.

FIG. 21.



This judgment carries with it the judgment that *No Y is some X; Some X is not some Y; Some Y is not some X.* The questions whether *Some X is Y, All Y is some X,* are left wholly undetermined.

§ 5. According to these modes of agreement and disagreement of cognitions, judgments are divided into, *First,* Affirmative and Negative, according as they cognise agreement or difference;

Secondly, Universal and Particular, according as the whole subject is joined to the predicate or only a part of the subject is joined to the predicate; *Thirdly*, Distributed, when the whole of both subject and predicate are compared; Semi-Distributed when a part of either predicate or subject is taken and is joined to a whole of the other cognition; Undistributed when neither the whole of the subject nor of the predicate is taken. Combining these divisions we have eight varieties of judgments as follows:—

TABLE.

1. U	Universal		Affirmative		Distributed			All X is all Y
2. A	Universal		Affirmative			Semi-dis		All X is some Y
3 I		Particular	Affirmative				Undis.	Some X is some Y
4. Y		Particular	Affirmative			Sem		Some X is all Y
5. E	Universal			Negative	Distributed			No X is (any) Y
6. η	Universal			Negative		Semi-dis.		No X is some Y
7. ω		Particular		Negative			Undis.	Some X is not some Y
8. O		Particular		Negative		Semi-dis.		Some X is no Y

The letters at the left are those which by general custom have been employed to designate the respective judgments. It will be noticed that there are four varieties of universal judgments, four of particular, four of affirmative, four of negative, two of distributed, four of semi-distributed, and two of undistributed.

Referring to the preceding section, it may be noticed that the following varieties of judgments are found in combination, the first one of each set implying the others; (I.) U, U, I, I; (II.) A, Y, I, I; (III.) I, I, ; (IV.) Y, A, ω, O; (V.) E, E, O, η, ω, ω; (VI.) η, O, ω, ω; (VII.) ω, ω; (VIII.) O, η, ω, ω. But it must be observed that in the first group the second U and I do not stand for the same U and I as the first; the second U is a universal affirmative distributed judgment but one in which the subject and predicate have changed places, as compared with the first. Similarly in the second I the subject and predicate have changed places. We may represent the changed judgments by U′ and I′ respectively. In the second group we have a similar converse of I and a judgment whose form is precisely that of Y, with the matter transposed, Y taking the place of X and X of Y. This change may be indicated by a prime mark, as Y′. A like change occurs in the fifth group where the fourth judgment has the form η but in which the matter is transposed as in Y′. Noting these peculiarities, in like manner wherever they occur we have the groups revised as follows:—

(I.) U, U′, I, I′ — U implies U′ I, etc.
(II.) A, Y′, I, I′ — A implies Y , etc.
(III.) I, I′ — etc. etc.
(IV.) Y, A′, ω, O
(V.) E, E′, O, η', ω, ω'
(VI.) η, O′, ω, ω'
(VII.) ω, ω'
(VIII.) O, η', ω, ω'.

§ 6. We may then add to the table of varieties of judgments, converse judgments for each there given as follows:—

TABLE.

U	has	its converse	U′;	All Y is all X.
A	"	"	Y′;	Some Y is all X.
I	"	"	I′;	Some Y is some X.
Y	"	"	A′;	All Y is some X.
E	"	"	E′;	No Y is (any) X.
η	"	"	O′;	Some Y is no X.
ω	"	"	ω';	Some Y is not some X.
O	"	"	η';	No Y is some X.

§ 7. It must further be remarked that every cognition implies a privative; every X a Not-X, every Y a Not-Y. Hence all positive judgments imply corresponding judgments between privative cognitions. These privative judgments, by using an accumulation of negatives, may be carried out to an unlimited extent. Privative judgments are of two general forms, as, (1) *All not-X is all not-Y*; and (2) *Not all X is not all Y.* The first (sometimes termed *contrapositive* judgment) means positively that the whole of the universe outside of X corresponds to and is the whole of the universe outside of Y, and may be treated exactly as an affirmative judgment. The second means that everything not all X (as not X or some X) corresponds to and is not all Y (as not Y or some Y). So also there may be one term privative judgments, as *All X is not all Y.* Privative judgments may be made from any positive judgments, but not all positive judgments imply the truth of all privatives which may be formed from them. Some privative judgments which are inferrible from one positive are also inferrible from another.

§ 8. Some judgments have different forms which are equivalents of one another. The judgment U, *All birds are all fowls of* *the air*, may be expressed, *No birds are not fowls of the air*, *No X is not Y*; U′, *All fowls of the air are all birds*, may be expressed, *No fowls of the air are not birds*, *No Y is not X*; A may also be expressed *No X is not Y.* E, *No whales are fish*, has its equivalent in, *All whales are no fish*, *All X is no Y.* η, *No whales are some fish*, has an equivalent, *All whales are not some fish*, *All X is not some Y.*

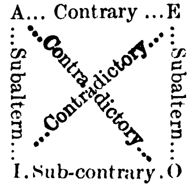
§ 9. Some judgments are termed Substitutive, and some Attributive. The former are those judgments in which a definite predicate is assigned to the subject, which may be substituted for it and serve as its definition; the latter are those in which an indefinite predicate is assigned to the subject. U and Y are substitutive; A and I attributive.

§ 10. Judgments have a relation to each other according to their Opposition. A and O are said to be contradictory. *All birds are fowls* and *Some birds are no fowls*, mutually exclude each other; we cannot make both judgments at once. In like manner E and I are contradictory. A and I, E and O, bear to each other respectively the relation of a subalternant judgment to a subalternate. The only opposition here is that of greater and less, included thereunder. We may imply I from A and O from E, but not A from I nor E from O. Though from *All birds are fowls*, we infer that *Some birds are some fowls*, we cannot infer the former from the latter. Passing from A to I is sometimes termed conversion by limitation (*per accidens*).

A and E are opposed to each other as contraries. They mutually exclude each other. We cannot at the same time make the judgment *All birds are fowls* and *No birds are fowls*. But contraries differ from contradictories in the matter of the judgments implied by their respective negatives. If *Not all birds are fowls*, it is implied that *Some birds are no fowls* (O), and if *No birds are not fowls*, it is implied that *All birds are fowls* (A). But if *not all birds are fowls*, it does not appear whether *No birds are fowls* or *Some birds are fowls*. Logicians express this distinction by saying that of contradictories one must be true and one false, while of contraries both cannot be true and both may be false.

I and Q are opposed as sub-contraries. Some being used in the sense of a portion, it is said that of sub-contraries one only can be false but both may be true.

The opposition of the principal judgments is expressed in the following common diagram:



§ 11. Judgments also differ from each other according to the Certainty which they express. Those judgments in which without qualification there is a coalescence of subject and predicate, or a disagreement, are termed Pure. Those in which there is an uncertainty or qualification of agreement or disagreement are called Modal. *All X is Y*, expresses a pure judgment, *All X is sometimes Y*, expressès a modal. There are all degrees of modality in judgments.

§ 12. Judgments are relatively Simple and Complex. Simple judgments are those in which a comparison is made between two cognitions taken each in its unity; in other words, where there is one subject and one predicate. Complex judgments are those in which are included more than one subject or more than one predicate, or both. *Bedford is in Brooklyn* expresses a relatively simple judgment; *Bedford and Bushwick are in Brooklyn; Bedford is in Brooklyn and both are in Kings county; Bedford is in Brooklyn and Bay Ridge is in New Utrecht*; *John is going if James goes*, are relatively complex. This distinction between judgments gives rise to the division of propositions into simple, compound, and complex.

§ 13. Judgments are also divided into Categorical and Hypothetical. A categorical judgment is one in which one cognition is affirmed to belong or not to belong to another. Hypothetical judgments are complex judgments in which one judgment is made to depend upon another which is a condition of it. *All X is Y* is categorical; *If X is Y, A is B* is hypothetical. Some hypothetical judgments are expressed as simple conditionals, as in the example first given, while some are expressed as disjunctives, *Either X is Y or A is B*; all of which imply four or more simple conditionals. When propositions take the form *If X is Y, it is A, or B, or C*, they are said to express conditional-disjunctive judgments. In hypothetical judgments, the separate judgments are termed respectively antecedent and consequent. Hypothetical judgments are relatively more complex than categorical; the former each contain at least two categorical judgments which are associated together. The antecedent in hypotheticals is properly modal, and the whole is modal. But some hypothetical propositions do not express real hypothetical judgments. Two categorical judgments, of which one is an inference from the other, are sometimes expressed hypothetically when there is really no modality in the antecedent. *If the world moves, we move,* would mean usually *The world moves; therefore we move.* Hypothetical judgments may be said to imply corresponding categoricals, which are either substitutive or attributive, and in which the assertion is the association of one judgment with another. *If this is music, music is a nuisance,* may be reduced to the form *That music is a nuisance follows from the fact of this being music.* (Categorical attributive.) *If the relation be as* 3 *to* 9 *it is the same as that of* 1 *to* 3 equals *The relation of* 3 *to* 9 *is the same as of* 1 *to* 3. (Categorical substitutive.) Hypotheticals may be reduced to categoricals by the formula, 'The case, fact, or notion of this existing is a case, fact, or notion of that existing.' Disjunctives when reduced are substitutive, while conditionals are sometimes substitutive and sometimes attributive.

§ 14. Judgments refer both to the Extension and Intension of concepts composing their terms. *All birds are fowls of the air* means that all the individuals of the class *birds* are included in the class *fowls of the air.* This is a meaning according to the extension of the concepts. It also means that the attributes which belong to the class birds belong also to some *fowls of the air.* So also where the predicate is a concept and the subject not: *This object is a tree* means that *this object* is one of the class *tree* and that it has the attributes belonging to *tree.*

§ 15. Judgments are Analytical and Synthetical (called also Explicative and Amplitive). Analytical judgments unfold the meaning of the subject without determining anything new concerning it. *A circle is a figure every point of whose circumference is equally distant from a point within called the centre,* is an analytical judgment, expressed (as always) by a proposition termed verbal. Synthetical judgments attribute to the subject something not directly implied in it, as *Women are angels of mercy.* This is a judgment adding to our knowledge, for it is not implied in the term *women* that they are *angels of mercy.* The same judgment, however, may be at one time or with one person synthetical, while with another or and at another time it may be analytical. *All resisting bodies possess power of attraction* when the law of gravitation was first discovered was synthetical; to a person hitherto ignorant of that law and its relation such a judgment would at any time be synthetical; but the *power of attraction* may be and is in educated minds a part of the intension of resisting *body*. In such cases the judgment is analytical. Analytical judgments are sometimes distinguished from tautologous judgments, which merely repeat the same matter in the same form instead of a new one. *Whatever is, is* expresses a tautologous judgment; these latter are however analytical, the distinction being not a radical one but one of convenience.

§ 16. Judgments may be True or False. True judgments are those which are in congruity with general experience. False judgments are those not in such congruity. That *All men are animals* is a true judgment, being in harmony with general presentative experience; objects described as men agree with other objects described as animals. *All men are birds* is a false judgment, because there is no congruity between objects known as men and objects known as birds. In like manner *Centaurs exist* is a false judgment, because no such objects as are implied by the term centaur have ever come within presentative experience; but *Centaurs have men's fore parts and horse's hind parts* is true, because it is the general experience that centaurs are so represented, nothing being said about their existence.

An ambiguity may arise from the fact that every judgment as a judgment or an idea is a presentative experience. *Centaurs exist* is really a judgment, that is a cognition of agreement between two cognitions described by the terms *centaurs* and *exist*; as such it is a presentative experience. But the cognitions as representative cognitions have no exactly concurrent or corresponding presentative cognition. Regarded as a mental phenomenon, it is a true (*i.e.* genuine) judgment; regarded as representative, it is false.

It does not follow that because a judgment is false it may not some time become true. Some of the results of scientific investigation have been reached by judgments supposed to be false, but which were afterward made true by verification in experience. And a judgment which to one is false is true to another. But in determining the truth or falsity of judgments, we term them true if general presentative experience confirms them, our notion of their reality being largely a belief based upon testimony. A further class might then be added of Doubtful judgments, whose truth or falsity is in suspense.

§ 17. Judgments may be classified according to their Import, and according to resemblances in the matter conjoined by them. These classes are termed Categories. The term category is not always restricted to explicit judgments: it is frequently made to include directly cognitions, which are the products and materials of judgments: but it has special significance as applied to judgments. There have been various systems of categories of different degrees of merit from Aristotle down, those of the latter philosopher and of Kant having perhaps attracted the most attention. Without discussing these now, we may include all judgments in one or another of the following classes, (1) Quantity, (2) Existence (Quality), (3) Co-existence, (4) Succession.[1] Judgments of quantity are those which predicate equality or inequality. In cognising an agreement or difference we can determine whether one of the objects of cognition is greater, less, or equal to the other. That such judgments actually are made is sufficiently evident. Also we may predicate agreement or disagreement between objects of cognition in the matter of existence or modes of presentativity. The fact that combinations of representative knowledge are made beyond the simple reproduction of presentative experience gives rise to fictitious objects of knowledge and to fictitious judgments. We may then predicate of an object existence or non-existence in different modes.

Two objects may or may not co-exist. If they do co-exist that co-existence may be in spatial position, as two trees before my eyes, as the various configurations of the extended world; or it may be such a co-existence as is found between a tree and its greenness, its height, its usefulness, or as is found between a man and his rationality. In other words, there may be a co-existence in place and a co-inherence of attributes. Two objects may be judged to succeed each other. But with the succession in some cases is associated the idea of the antecedent producing or causing the consequent; in other cases this association is wanting. Accordingly, then, judgments of succession are of order in time or cause and effect.

§ 18. That the above classes of judgments can be made no one will be likely to dispute: but it may be thought that they are not comprehensive of all judgments. It is not a very easy matter to prove that they are, for no one can collect and examine all of the practically infinite number of judgments. But considering the fact that in forming these classes we make use of the most general conceptions which the human mind has formed, there is a reasonable presumption of the classification being exhaustive. And if it be difficult to show affirmatively that the four groups include all judgments, it may be claimed quite confidently that until some one succeeds in finding a judgment which cannot be included in one of them, they may be allowed to stand.

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[1] See Chap. XVII. Sec. 26.

§ 19. The Aristotelian categories are so obviously defective that they are of no use except to show the progress of knowledge. One insuperable objection to the Kantian categories is that the category of Modality is certainly one of Relation, and that all indeed may be considered categories of Relation. There is as much relation between Possibility and Impossibility as between Inherence and Subsistence; nothing but an arbitrary line appears to separate the group Relation and the group Modality. Kant's Category of Quantity includes universals, particular and singular judgments, and to this, so far as it goes, no exception can be taken except that singular may be included in universal. Quality includes Affirmative, Negative and Infinite (Reality, Negation and Limitation). In this the same error is noticeable as in the former, an error of making that a third which is included in either the first or second. *Infinite* is either a simple privative, in which case it is a negative judgment, or it is a contrapositive equal to not-finite, in which case it is a limited conception which may be regarded as affirmative or negative-affirmative. Again, Kant's category of relation as applied to judgments contains Categorical, Hypothetical and Disjunctive, giving us here also a superfluous division, disjunctive judgments being hypothetical (in the view of most), or categorical (in the estimation of some). The Category of Modality, in addition to Problematical (possible) and Assertorial (real) judgments, has Apodeictical (necessary), though the author himself admits that 'Necessity is nothing but Existence which is given through the Possibility itself.' ('A necessary existence is an existence whose existence is given in the very possibility of its existence.'—Note by Translator.) Eliminating the superfluities, then, Kant's Categories stand as follows:—

I. *Quantity.*	II. *Quality.*
Unity (Universal)	Reality (Affirmative)
Plurality (Particular)	Negation (Negative)

III. *Relation.*

Inherence and Subsistence (Categorical)
Causality and Dependence (Hypothetical)

IV. *Modality.*

Possibility—Impossibility (Problematical)
Existence—Non-Existence (Assertorial)

§ 20. Kant's error in giving a third division of each of his categories arose probably from his failing to understand the true nature of psychological processes. He did not see that totality, for instance, is solely plurals associated into a new unity, which is a unity as complete as is any one of the units composing the plurality. So with limitation he was in similar confusion, not believing that his infinite was never anything more than a new affirmative, his limitation no more than a new reality. The same trouble affects apparently the other two. The author saw the objections which are here brought out, but thought that while for the purposes of general logic singulars (for instance) may be treated as universals, for the purposes of transcendental logic they are essentially different. With the transcendental logic, however, a collector of the data of philosophy, an observer of facts has nothing to do, and the requisites of a scientific classification are such as to demand that unnecessary parts be excised unflinchingly without any tenderness on account of the transcendental. Taking the table as revised then (for only as revised can we use it at all), we meet first with the category of Quantity, which may be accepted, extending it to all relations of equality and inequality. Passing to Quality we find, taking the divisions on the side of what Kant calls pure conceptions (abstracts) the pair Reality and Negation, corresponding exactly with Existence and Non-Existence in one meaning of terms, and in another having the former pair included under the latter. In one sense of the word *Real* means existent as opposed to non-existent; in another sense there are two kinds of existence, real and ideal. Without enumerating the half-dozen senses in which the term is employed, it is sufficient to say that in all of them it imports existence in certain modes. The word *Negation* as here used by Kant is the opposite of Reality and equivalent to Non-Reality. If this be true, the pair Reality and Negation may be included under Existence and Non-Existence. If now we take the side of judgments, we observe that the classes of Affirmative and Negative judgments, while a perfectly valid division, run through all classes of judgments whatsoever. Judgments of Quantity are affirmative or negative equally with those of Quality. The distinction is one of form, based upon the fact that all judgments are of agreement or disagreement. Quality, then, refers to the existence of an object under some mode of presentativity. As to the third category, we have already commented upon the fact that every subdivision given by Kant might be ranged under it. As to the particular subdivisions which he gives, on the one side, Inherence and Subsistence is manifestly the same with Co-inherence of Attributes, and Causality and Dependence with Cause and Effect. On the other side, Categorical and Hypothetical are divisions according to form, which cover the whole extent of judgments. In the last category we have besides Existence and Non-Existence, which may be allowed as one class, Possibility and Impossibility. But all possibility is possibility of something. A judgment of possibility must hence be a judgment of the possibility of existence, quantity, inherence and subsistence, and so forth. We gain nothing, then, by making a division called judgments of possibility, for we are obliged to analyse the division into more ultimate divisions. Assertorial and Problematical is a division according to form, which is substantially that of pure and modal, and applies to all judgments.

The categories of Kant then yield us nothing but what is contained in our classification given above, and the latter includes besides an extension of the class quantity to cover all the divisions of greater and less, equality and inequality; and perhaps also order in place, and order in time;—though the last two might be included in Kant's idea of quantity, but no distinction is drawn between them.

§ 21. John Stuart Mill makes five categories of propositions: Existence, Co-existence, Sequence, Causation, and Resemblance. The objection to making resemblance a category is that all judgments express resemblance or difference; and all cases which he includes under resemblance can be placed under one of the other classes here given. *The heat of to-day is equal to the heat of yesterday* expresses a judgment of quantity. *This colour is like that colour* is a proposition of co-existence, as order in place and co-inherence of attributes. *Socrates is a man* expresses co-inherence of attributes. So also *The sensation I feel is one of tightness. The colour I saw yesterday is a white colour.* If then we add the category of quantity to Mr. Mill's list, we may strike out that of resemblance. But causation is certainly a form of sequence; it is not however the whole of sequence, the difference being simple order in time.

§ 22. Recapitulating, we have seen that a judgment is a cognition of agreement or difference, and that judgments are involved in all cognitions; that judgments are composed of at least two distinct cognitions called respectively subject and predicate; that judgments are:

Explicit or Implicit.
Universal or Particular.
Affirmative or Negative.
Distributed, Semi-Distributed, or Undistributed.
Primary or Converse.
Positive or Privative.
Concordant or Opposed.
Substitutive or Attributive (This division does not apply to all judgments).
Simple or Complex.
Categorical or Hypothetical.
In Extension or Intension (This does not apply to all).
Analytical, Synthetical, or Tautologous.
True, False, or Doubtful.
Of Quantity, Existence (Quality), Co-existence, or Succession.

Of Positive judgment, there are eight general forms; of Privative judgments an indefinite number.

CHAPTER LII.

FICTIONS.

§ 1. WE have thus far found as products of cognition Single Aggregate Cognitions embracing Percepts, Re-percepts, Concepts, and Abstracts, and Dual Aggregate Cognitions called Judgments. We have now to deal with a class of products which may be either in the single or dual form. They are distinguished solely by their want of conformity to presentative cognition, as such; by their having no exactly coincident reality in previous experience. These cognitions may be termed *Fictions*.

§ 2. Fictions as mental experiences have a reality. The idea of a centaur is a reality as an idea, but there is no sensational experience that corresponds to this idea. The various parts of which this ideal creature is formed can be traced back to correspondent sensations, but the whole is a fiction growing out of the plastic power of constructive redintegration which recombines in new forms the materials which former experience has given.

§ 3. Pursuing the order of representative cognition we may find fictions in all grades of representative cognitions above the lowest. Following the general classification of representations we may make the following classification of fictions:—

Class First. Those fictions which result from a mere separation of the parts of which a presentative object is made up; as when there is imagined a bird without wings, a rose without colour, a man with no arms.

Class Second. Those fictions which result from a combination and recombination of parts and wholes of representative cognitions so as to form a new whole unknown to presentative experience, as when a centaur or a hippogriff are imagined.

Class Third. Those fictions which result from generalisation of fictitious particulars and from abstractions, as when we form a cognition of the class centaurs, or of prudence, goodness, humanity.

Class Fourth. Those combinations of general notions with particulars in couples, in which the result as a whole is not in accordance with general experience, or previous individual presentative experience; as judgments which are false or unverified, and conclusions of reasonings which are erroneous or as yet untested by observation.

Class Fifth. Those complex combinations of cognitions which constitute the most highly re-representative cognition, and in which the resultant cognition is as a whole fictitious, as the imaginings in a reverie, air-castles, the ideals of the artist, the moralist, or the scientist.

§ 4. In the light of this classification and of the definitions preceding we observe that percepts from their nature never can be fictions. They are antithetically opposed to fictions: in so far as anything is a percept it is presentative and real, excluding un-reality. Representative percepts, or as I prefer to call them re-percepts, may be fictions, but are not necessarily so. If I remember a dog which I saw running along the street yesterday, the mental product of the representative powers is not a fiction ; if, however, I recall the same dog as seen under the same circumstances, and the same in all respects except that I imagine him to be without any tail, the re-percept is a fiction ; or if I mentally transfer the same dog intact to a neighbouring yard where I never have seen him, instead of locating him as running in the street, the re-percept is fictitious—not wholly a fiction, for so far forth as the cognition relates to the dog alone it is not fictitious ; but taken as a whole representative experience, dog and surroundings, the conjunction is such as to make the cognition a fiction. Some (but not all) re-percepts then are fictions. An abstract is properly a fiction, there being no presentative experience of an attribute apart from that of which it is an attribute. Inasmuch, however, as an abstract is a mental phenomenon, as an idea it has its presentative side, and as such receives an investiture of reality which has led people to believe that because it was a mental reality it also must have external reality. An abstract is a reality of the mind formed by the plastic powers, but to which there is no correspondent external phenomenon agreeing in its entirety.

When concepts are taken up for examination it is not so easy to determine whether they are to be classed as realities or as fictions. If I form the concept *tree*, there is evidently no external reality corresponding to this general notion except that represented in the particulars, and yet the concept is alone made up of and includes those particulars which are found in presentative experience, so that when anything is predicated of the class expressed by tree the judgment may be true and real, as *Trees have foliage*. Moreover, when the mind has before it a general notion, it has some individual object with an indefinite multitude of others (similar) attached ; but the individual objects which are prominent are not the exact reproductions of objects which have occurred in experience ; they are disconnected from the incidents of time and place and surroundings—in short, they are often imaginary objects which resemble actual objects perceived at some time in the past. The indefinite number of similar objects associated is made up in the same way, of parts of past experiences. If we could form a concept of so small a number of particulars that they would all be recalled definitely, the case would be different ; but as a fact our concepts are made up of so great a number of particulars that the object before the mind, when the concept is used, is one imagined and hence fictitious. There would seem to be then very plausible reasons for classing all concepts as fictions. But on the other hand some concepts are very closely connected with realities in their particulars, while concepts can equally be made of fictitious particulars, which concepts are as closely connected with those particulars as are the concepts in the former case with real particulars. There is a concept *centaur* and a concept *horse*, which are as widely different in the ideas they convey as are the fictitious and real particulars which compose the respective aggregates. If we consider all concepts fictions we should not be able to make as evident the distinction between these two classes. On the whole, it may be concluded that while all concepts in a sense are fictions, and while all have some characteristics of fictions, yet the broad distinction is proper, by which under the name Real Concepts may be included those concepts whose particulars are real, and under the name Fictitious Concepts those whose particulars are fictions. Making this division, then, we are obliged to say that some concepts are fictions and some are not; or else that some concepts are Real Fictions and others Fictitious Fictions!

The same difficulty which affects concepts extends also to judgments. Some judgments evidently are not fictions, but the position we assign to concepts affects vitally the location of judgments. But if the manner in which we have disposed of the former be correct, the way is clear enough to the disposition of the latter. We may include under fictions all false judgments and all true judgments in which the subject is a fiction. For it is manifest that if a judgment is false it is not congruous with presentative experience, whether its components are so or are not. If we say *Snow is black* we have to re-construct snow in mind; that is, we image or create a fictitious object resembling snow except in point of colour. Again, no matter what we may predicate of a fictitious subject, we only have a fictitious cognition. We may say *A hippogriff is white, large, old*, etc., etc., but we have no cognition that is not a fiction. It may be objected that the judgment *Prudence is a virtue* is not fictitious: but *prudence* is either to be resolved into *prudent men* or to be considered as an imagined entity; in the latter case it can hardly be claimed that we are to get anything out of an imagined entity that is other than fictitious, while in the former case the subject has ceased to be a fiction, a real concept having taken its place.

§ 5. Without attempting to follow any scientific order and to make any mutually exclusive classes, we will notice some prominent groups of fictions. And first what are called *Fancies* demand attentions. A distinction is drawn by some thinkers between fancy and imagination, the terms referring to capacities of the mind to produce certain effects, by which fancy refers to the power to represent images as such, detached from their former relations of time, place, and previous cognitions, while imagination products are the more elaborate and orderly creations of the mind, which are fashioned with greater care and more systematic completeness. There is no ground for a distinction in the intellectual powers involved in an act of fancy and an act of imagination, as we have before seen; but those products which go under the name of fancies seem to constitute a group sufficiently coherent to deserve a separate position. Fancies are exemplified in reverie, where a train of pictures runs through the mind without any corresponding bond of connection in objective experience; they are also seen in dreams and in the mental hallucinations of the insane. They seem to be mere images detached from the original trains of association, and forming new connections according to accidental contiguities and resemblances. Fantastic similarities and grotesque collocations characterise these products. The associations are comparatively irregular, capricious and kaleidoscopic. There is little regard paid even to incongruities, or to those which reflection would at once suggest. Pictures of men walking on ceilings with their heads down would be formed with no thought of any natural obstacles in the way of such a proceeding. No difficulty would arise in connection with a fancy of water running up hill. It is not practicable to draw any line sharply marking off fancies from other imaginative products, but the general indicia of the former are such as have been given. In addition to reveries and abnormal states of consciousness as giving illustrations of the play of fancy, there may be added a great many states of mind when a person is seeking rest for his intellectual powers from strain, and suffers his thoughts to have free play, to come and go without constraint, when he is thinking about nothing in particular. In such moments the mind is full of proper fancies.

§ 6. An important group of fictions is indicated by the name *Ideals*. Exactly what constitutes an ideal is a difficult matter to determine, since the word is used in a variety of significations and applications. Very much the same meaning is conveyed by the word *Archetype* and by the Kantian term *Schema.* The word *archetype* may be misleading, since it sometimes refers (as with Locke) to objects in sensible experience, of which ideas are in his view copies, and sometimes (as with Plato and Cudworth) to the products of a creative power of the mind. The term *schema* with Kant was applied to designate the universal process of the imagination, by which it furnishes for a conception a proper image: if we used it to cover fictions of the kind now before us, we should be obliged to apply it to individual images, which employment would be different from the Kantian use of the name. It does not seem, therefore, that we can substitute any other word for *ideal* in the present case, which will be so intelligible or convey so accurately to the mind the class of cognitions with which we have a concern. Pains must be taken, however, not to regard the word as used in a general sense opposed to real or sensational, but in a limited meaning pertinent only to the most complex products of representation. An ideal is a mental pattern or model of perfection, as a matter of contemplation, for imitation, or for achievement. Ideals, then, may be considered as intellectual schemes or types, or as ends of attainment. The latter are connected with the departments of feeling and volition, the former constitute the subject of the present examination. An ideal type is a standard by which are measured objects of the same kind, whether ideal or real. Such types may be ranged in three divisions: (1) Ideals of Truth, (2) Ideals of Beauty, and (3) Ideals of Goodness. With most of these ideals the presence of an emotion is a characteristic feature, but the ideal pattern which awakens and defines the emotion is an intellectual product.

§ 7. Ideals of Truth, or Scientific Ideals, are fictions of the mind whose meaning has primary reference to intellectual congruities and incongruities. A type of a species, a representative object which combines the essential characteristics of a group, is an ideal of this class. I may construct an ideal cat as a type of all felines, the construction being made according to a popular idea of a cat based upon external features or according to a scientific idea based upon peculiarities of anatomical structure or other scientific *notæ.* In the same way I may form a typical horse, fish, bird, man, animal. The question may arise, How is such an ideal object to be distinguished from a concept? One important difference certainly is that in a concept there is present the cognition of a multitude of individuals combining to form the concept; while in cognising an ideal type only one individual is thought of. The type is considered, not as a grasping together of particulars, but as a fully formed individual to be used as a standard or measure. Again, a concept has no especial reference to the perfection of the individuals composing it. The concept *horse* may include lame, blind, spavined, short-tailed, gelded horses; the ideal or type of a horse is a cognition of a perfect horse. It seems very probable (as has been before asserted) that when we make use of a concept, we actually do bring before the mind an ideal type, together with a confused multitude of remembered individuals, so that the typical object forms the definite centre of the concept around which are clustered in thought the individuals which form its extension. Plausibility is given to this view by considering the fact that what we predicate of a class is predicated only of normal individuals of that class. If we say *All horses can run*, we mean all normal or perfect horses, not crippled beasts. When we make the predication we have as our concept subject some *norma* of a horse with the further idea that there are numerous individuals resembling it. This ideal type becomes a symbol of all that the concept contains. It differs from a re-percept only in being a construction made up of parts taken from a number of individuals. If we could have an object cut off from its relations and forming a sole specimen of its kind (if such an expression be permitted for the moment), then the re-percept of that object would be identical with its type. The moment, however, that modifications are made by association with similar individuals, the mental image passes from a re-percept of an individual into an ideal construction typical of a class. It can hardly be said that in all concepts a constructed (fictitious) type is found, properly speaking; for in some concepts a re-percept may serve the purpose of type in the manner just alluded to; and when the number of individuals composing the concept is small, all may be brought up together upon occasion, and a new object may be compared with any one of the re-percepts, or with all in succession, each one serving as a type or standard. If I have never seen but one starfish, when at last I encounter a second one, the image called up is that of the former starfish I saw, by which I measure and identify the present one. After I have seen the first, by the force of experience I believe there are others like it, and so construct a concept *starfish* the centre of which is the represented starfish I saw. The ideal of a starfish in such a case can hardly be said to be a construction of the mind; it is rather a re-percept.

Proceeding further to illustrate scientific ideals we may remark geometrical figures. A line, a surface, a circle, a square, a pentagon, a rectangle, a triangle—all are fictions. No geometrical line is ever given in presentative external experience; a circle exists only in imagination. The mind pictures a something with length and no breadth or thickness, and upon this ideal line predications are made and from it deductions are consequent. By it all lines in experience are measured and determined. It is not correct, however, to say that these latter are copies of the ideal line; more properly the ideal line is a copy of the real. The ideal line is a result of abstractive association, of the constructive powers of the intellect whose operation is in and upon the materials experience gives, and which by new combinations of those materials elicits products unknown to experience. An object is considered solely with reference to its length, its breadth and thickness being left out of sight; other objects receive similar treatment; those objects thus considered become associated, and an ideal type is formed of an object having the property of extension in only one direction. Similarly are created ideal circles, squares, triangles, and other figures. All geometrical figures are thus ideal creations having no exact counterpart in the objective world. It might be said that a solid has corresponding realities; but a geometrical solid has no other properties for consideration than length, breadth, and thickness. Colour, weight, hardness are foreign to the geometrical figure; and external experience gives nothing wherein the three properties specified are found alone.

Many of the ideals of the inventor and the artisan are scientific. Sometimes they are ideals of the useful, but when the creations of the mind operating as models for inventive labour are ideals of scientific conformities and applications of the forces of nature according to certain laws and in certain directions irrespective of the utility or beauty of the product, they are properly ideals of truth.

More complex still are ideals of the perfection of systems of knowledge. In all elaborations of knowledge there is much that the mind recognises as imperfect and susceptible of improvement. A general type of completeness and congruity is formed. Some item of proof is found to be lacking here; some link of connection missing there; something not yet discovered, some parts not reconciled, some adjustments of location and order in time not yet perfected. In all these things the imagination creates its types and standards, even outrunning realities and surpassing actual 'Non-Ego experiences. All the triumphs of science have been achieved through the ideals which constructive associations have formed to act as guides and regulators of action.

Although scientific ideals are not characterised and distinguished by their ability to excite emotion, it must not be supposed that they are unattended with emotion. There is a pleasure in a discovered or pictured congruity; there also may be disagreeable accompaniments and suggestions which create painful feelings. There is a tendency also for scientific perfection to excite æsthetic emotion; also associations of use and value will frequently awaken emotions of the useful and desirable. These are liable to be attached to scientific ideals, and some of them are conspicuous in particular cases. The discovery of a scientific truth and the contemplation of a scientific ideal alike awaken in some minds a rapture equal to that of the artist or poet.

§ 8. Ideals of Beauty, or Æsthetic Ideals, are creations of the mind which excite æsthetic emotions. We have seen heretofore that the complex emotions termed æsthetic are aroused by things which have pleasure for their immediate end, which are free from disagreeable accompaniments, and which can be enjoyed by more than one or by more than a few persons. Any fiction, therefore, which will satisfy these conditions is an æsthetic ideal; any type or group of types, any ideal figure or collocation of figures, any system or part of system may be æsthetic in its character.

The elements of the Beautiful have been variously specified by different authors. Hogarth makes six: (1) Fitness of the parts to the design for which the object was formed; (2) Variety if it do not degenerate into confusion; (3) Uniformity or symmetry when rendered necessary by the design; (4) Simplicity when joined with variety; (5) Intricacy, as indicated in moving and serpentine lines; (6) Magnitude as exciting awe and admiration. Alison particularises at length the components of products which induce æsthetic effects. Ruskin gives Infinity, Unity, Repose, Symmetry, Purity, Moderation and Vital Beauty embracing all the associations of adaptation to ends. Specifying more in detail we may note beauty of action and motion as well as of repose, beauty of truth or scientific congruity, of harmony, of contrast, of proportion, of eurarithmy, of utility, of order, of emotion and passion, of inorganic matter, of organic matter, of the operations of intelligence and spirit.

The ideals of beauty classified with reference to the æsthetic arts are ranged in six principal classes: those of (1) Architecture; (2) Painting; (3) Sculpture; (4) Music; (5) Landscape; (6) Discourse, including Oratory and Poetry. There, are however, many æsthetic ideals that are not peculiar to the fine arts, though all may be susceptible of employment for the purposes of fine art constructions.

§ 9. Ideals of Goodness include Ideals of the Useful and Desirable generally considered; and, as a class differentiated from these, Ethical Ideals. The latter are those ideals which awaken ethical emotions, and ethical emotions, it will be remembered, are those arising in connection with approval or disapproval of a man's acts or states of consciousness considered with reference primarily to their bearings upon the interests or pleasure of other sentient beings, and secondarily with reference to their reflex consequences upon self. But in the broader sense ideals of goodness are ideals of things as objects of utility, desire, or pursuit. We may, therefore, have ideals of goodness relating to things which are to be sought for the gratification of appetites. There may be an ideal of a hunger-satisfying feast contemplated, not æsthetically, but as an object for attainment. We may have ideals of a state of general bodily comfort to be sought after and ultimately enjoyed. The Epicurean ideal of life may be adopted, and is truly an ideal of goodness. Again, we may entertain and foster ideals of that which is useful for any purpose, tending to promote our own interests, by furthering our plans for wealth, position, or fame, thus affording another class of ideals of goodness. Or, still further, we may entertain ideals of excellence of character, to be sought after as a *summum bonum*. Yet again our scope of vision may be broadened, and we may take within our horizon ideals of the general good, wherein the welfare of our fellows, or even all sentient beings, is important. The most complete charity, a universal benevolent regard, a state of general blessedness may be included within our ideal of the good to be attained. We may reach beyond the present life and create ideals of a goodness to be secured in a higher and better world, and find in a God of infinite goodness our ideal of τὸ ἀγαθόν, the type and pattern of all that is worthy of attainment.

If we enumerate some of the varieties of ideals of goodness which are expressed by abstract names, we shall have ideals of virtue, prudence, sagacity, shrewdness, temperance, continence, modesty, courage, duty, self-sacrifice, benevolence, self-esteem, reverence, honesty, happiness, wealth, honour, fame, repletion, chastity, friendship, generosity, ambition, justice and many others. All these receive their character as furnishing ends of exertion. So far as they are intellectual ideals they are simply pictures or representations which carry with them volitional impulses; they are distinguished by this peculiarity, and are best studied as products of feeling and volition.

§ 10. The close interdependence of these three general divisions of ideals, as also their general correspondence, may be noticed. The same ideal may be an ideal of truth, beauty, or goodness, according as it is viewed; that is to say, the same mental picture or fiction may serve the purpose of a scientific or cognitive ideal; of awakening pleasure, or of an emotive ideal; of inspiring volition, or a volitional ideal. I may form an ideal of a perfect apparatus for navigating the air. I can regard it first as a scientific congruity with the laws of nature; I can then consider it as an object of beauty inspiring genuine æsthetic emotion; in the third place, I can esteem it for its great utility in subserving the ends of public interest. As a fact, our ideals are often mixtures of beauty, truth and goodness. Perhaps scientific ideals are the most independent; we may apprehend scientific ideal truth without apparent regard to its æsthetic or moral aspects. Indeed these may be left out of sight altogether in some cases. But even when there are disagreeable suggestions attendant upon the creation of scientific ideals, these may be omitted from the picture and an æsthetic colouring given to it. So also a scientific ideal may be held up as an incentive to exertion in the general moral view that all knowledge attained is useful for some purpose. In the case of æsthetic ideals it is absolutely necessary that some degree of scientific congruity should be observed, else we have no æsthetic effect at all. The very names of the elements of beauty, as fitness, proportion, harmony, imply a scientific imagination as furnishing foundations for æsthetic. An ideal landscape would be spoiled if a tree were present which failed to accord with the scientific type of a tree. So also the utility of an object often determines its beauty. Prominently is this seen in architecture, where a pillar, an arch, or a foundation, is totally destitute of æsthetic effect unless it subserves the ends of the edifice. In the same manner, examining moral ideals, we find that their very goodness often depends upon their truth and beauty. Very few things can be cited as good which do not carry with them the value of truth. Moreover, I may esteem prudence (for instance) a desirable virtue; in order to seek prudence I must know what prudence is. This demands a scientific ideal. Scientific ideals thus lie at the basis of ideals of goodness; the latter are in fact the former with the added associations of volition. And again, the utility of some things depends upon their beauty, while the members of the whole class of æsthetic ideals have utility as being objects of pleasurable contemplation, and thus ends to be sought.

Scientific ideals then seem to be ideals as objects peculiarly of cognition, æsthetic ideals as objects of emotion, ideals of goodness as objects of volition. Their close connection and interfusion can be hence argued from the interdependence of cognition, feeling and volition. As Akenside has expressed it—

> Truth and Good are one,
> And Beauty dwells in them, and they in her,
> With like participation.

Or, we may say with Tennyson—

> That Beauty, Good, and Knowledge are three sisters
> That dote upon each other, friends to man,
> Living together under the same roof,
> And never can be sundered without tears.

§ 11. Another important fact in connection with the three classes of ideals is that the mind does not elaborate and dwell upon ideals of the false, the ugly, and the bad. As measured by ideals things are relatively perfect—relatively true or congruous, relatively beautiful, relatively good. There are gradations of truth, beauty, and goodness, but everything is measured by these ideal abstracts, not by ideals of their opposites. The bad is that which is not good, the ugly that which is not beautiful, the false that which is not true. The mind does not like to dwell upon or approach that which is false, unhandsome, immoral, and useless; desires do not run that way, if the mind is convinced that the things *are* false, ugly, and bad. If, when in a wider view certain things are bad or false, the individual mind follows them, it is only because in that mind they have become or naturally are true and good. The ideal manhood of the savage includes what to the civilised is cruelty and injustice; but to the savage it is as certainly a good as are moderation, charity and justice to the enlightened. Frequently men are born and educated into the belief, for instance, that the use of strong drink is an evil. They abhor it; but yielding to temptation, little by little, the former belief gives way, and what before was undesirable and bad becomes desirable and good. They 'first endure, then pity, then embrace.' The ideals of a licentious imagination are not ideals of the bad, but of good; the badness is only in the mind of others who have higher and better ideals. Those who believe in a personal devil make him a god as really as they do the Supreme Jehovah. To be sure, we may æsthetically picture falsehood, incongruity, ugliness or evil, but the picture itself is 'a thing of beauty' and not of ugliness. The ideal of Laocoon and his sons struggling with the serpents, or of Rizpah driving off the birds of prey from the corpses of those dear to her, is truly an æsthetic ideal, but not an ideal of the ugly; if it were the latter the mind would not dwell upon it an instant but would cast it out utterly; in truth it never would be formed. The current of the mind is toward pleasure and away from pain. There may be pleasure in the sufferings of another, but none in our own dole; the formation of ideals of the bad, the ugly, the incongruous, would require that we should make the undesirable (to us) desirable, the painful pleasurable, the false true. The creation of ideals of such a character is an absurdity and a contradiction of thought. Therefore, when men try to form what we call ideals of the false, they make the false to them true; when they follow ideals of the ugly, they turn the ugly into the (to them) beautiful; when they cleave to the bad, they transform it into good. 'Evil be thou my good.'

§ 12. That ideals are continually changing in the same mind, and in the general human mind, does not need argument. If it were not so there would be no progress, no integration. Such a state of things would be evidence that mankind is stationary. The opposite being the case, however, we observe innumerable diversities of standards in everything. What is true to one is untrue to another, what is good to this man, this nation, this age, is evil to another. Ideals grow out of each other, and pass beyond each other as the outer circles of a tree in its growth become the inner. What is to-day an ideal of perfection is to-morrow superseded by a fuller and grander ideal. Sometimes the new ideal embraces the old and includes the latter as a part of itself, sometimes excludes it altogether. What seemed to be true may turn out to be only a partial truth, or it may be falsehood; that which was held up as good may still be preserved and of some utility, or it may be rejected entirely.

§ 13. A special class of scientific ideals deserves mention in this connection, namely, that of Hypotheses. These are fictions employed tentatively for the purpose of unifying and explaining facts. They are not created arbitrarily, but are conformable to experience and analogy, being suggested according to probabilities, but not yet confirmed by more certain evidence. 'An hypothesis is any supposition which we make (either without actual evidence or upon evidence avowedly insufficient) in order to endeavour to deduce from it conclusions in accordance with facts which are known to be real; under the idea that if the conclusion to which the hypothesis leads are known truths, the hypothesis itself either must be, or at least is likely to be true.'[1] An hypothesis may, therefore, when verified pass into a true judgment or real concept; or it may be superseded by a higher hypothetical generalisation, and may be subsumed thereunder; or again it may be found false and cast out altogether. Of course there are many interesting facts and questions connected with the formation and employment of hypotheses, but an examination and investigation of them would take us farther into the domain of logic than would comport with the purpose of this work.

§ 14. Leaving now the consideration of ideals, as ideals of goodness, beauty and truth, we will close the exposition of fictions by adverting to two groups more. The first of these comprehends much of what is termed *à priori* knowledge. The expression *à priori* as latterly employed with reference to cognition marks that knowledge which is supposed to be or pronounced to be above and independent of experience. Kant in the 'Critique of Pure Reason' proposes as the grand problem of philosophy: Are synthetical judgments *à priori* possible? The criteria which Kant lays down for testing *à priori* knowledge are two, universality and necessity. Such knowledge embraces both that which is conveyed by certain names, as *Time*, *Space*, *The Infinite*, *The Absolute*, *Beauty*, *Goodness*, and that conveyed by certain axiomatic propositions, as *Whatever is, is*; *Two straight lines which intersect each other cannot enclose a space.* Besides the criteria of universality and necessity, *à priori* knowledge is in other words sometimes described as intuitive, innate, of such a character that when expressed in a proposition its contradictory is inconceivable. As we have already had occasion to notice the impropriety of the term *intuitive* as applied to such cognitions, and shall presently discuss the subject further, we may dismiss that word peremptorily with the remark that we shall have no occasion for it in explaining anything, it being always itself sadly in need of explanation. Neither will the word *innate* be of much help to us. Those who contend for innate idea philosophies do not urge that we are born with those ideas, but only with the capacities for them, that is, our minds are so constituted that perforce we must receive them. But our minds, it must be allowed, are so constituted that we must also obtain knowledge from experience. Our *à posteriori* knowledge then is as much innate as our *à priori*, and we must discard the term innate as a characteristic mark of *à priori* knowledge. We are obliged therefore to fall back upon *universal* and *necessary*, to obtain a true idea of what is meant by the phrase, for the inconceivability of the contradictory is only another expression of the fact of necessity. We will now proceed to inquire of what nature is *à priori* knowledge as bearing upon the subject of this chapter. A ready explanation can be found of that portion of an *à priori* truth which is verified by individual experience. As compared with or applied to specific experience it corresponds exactly to a generalisation from experience. That two straight lines intersecting one another do not include a space is evidently enough a generalisation from all the experience we have of straight lines. Time and space are attributes of all our experience. But *à priori* knowledge goes farther, and claims that wherever there are two straight lines intersecting one another, they do not and cannot enclose space; that all experience which any one has or can have is in time and space. Since we cannot see all straight lines or be or go everywhere in the universe outside of our experience, the last enunciation means that whenever we think of or imagine two straight lines intersecting we imagine them as non-inclusive of a space; whenever we think of objects we think of them as in time or space and time. Moreover, when we think of sentient minds as considering these relations we always think of them as viewing those relations in the same way we view them. Hence so far as *à priori* cognitions extend beyond the scope of our experience they depend upon imagination and are fictions. Similarly with other axioms and synthetical judgments *à priori*. With reference to so called *à priori* cognitions of The Infinite, The Absolute, The Unconditional, it may be repeated that since the terms are privative it follows that when we form a conception of the infinite, the absolute, and so forth, we create positive cognitions which are of course fictions of the mind. So with cognitions of The Good, The Beautiful; we form ideals which are creations of the imagination, and give to them universality and necessity in the same manner as we give to synthetical judgments *à priori*; we invariably think of sentient beings as having them. These remarks may be sufficient to show that *à priori* knowledge is either generalisation from experience or an extension of experience in imagination, and so far as it is the latter *à priori* cognitions may be classed among fictions.

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[1] J. S. Mill, *Logic*, Bk. II. Chap. XIV. Sec. 4.

§ 15. Anticipations of the future form a group of fictions demanding mention. The mind is continually picturing to itself the future, as regards acts, pleasures and pains, or cognitive experience. We calculate what we will do to-morrow, where we shall live next year, what general course we will pursue. We prognosticate the condition of the world, and even extend our prolepsis to a state beyond the grave. So far as such anticipation is intellectual, it is a process of construction wherein images are formed by combination and recombination of elements given by past experience. These images are variable according to the habits and education of the individual. There are, however, certain anticipations which are general, derived from long and unbroken uniformity in experience. The anticipation that the sun will rise to-morrow, that spring will return in the next twelvemonth, that death will follow present life, are of this character. The more uniformities are detected in nature, the more the laws of phenomena are apprehended, the more general become anticipations of what the future will bring forth, and the greater the certainty that attaches to them. Even when the mind expects the recurrence of that which has uniformily occurred in the past, it is not a mere representation of that past. The past experience is represented with the knowledge that it has happened, while associated with it is a similar experience with the knowledge that it has not happened. This latter, with the accompanying volitional preparedness to act, constitutes the anticipation; the intellectual part consists of a construction resembling its equivalent represented experience, except that in the latter the experience is remembered as having occurred, while in the former it is pictured as occurring but at the same time known not to have occurred. The imagined anticipatory experience is a fiction, the remembered experience is a re-percept.

§ 16. The thought must carefully be retained in view that a constructive fiction of the mind is not necessarily of objective untruth and invalidity. All that is meant by the term fiction is that in the mind of the individual a construction so denominated is made which has no correspondent (to that individual) in presentative cognition. Or, that a construction is made which in the minds of a definite or an indefinite number of individuals has no such correspondent. Accordingly it may and often does transpire (as has been before remarked) that what is properly at one time a fiction becomes afterward a scientific truth ; or that which to one person or class of persons is imagination simply, to another class has a confirmation in presentative experience. There is no necessary antithesis between a scientific truth and a mental fiction ; the antithesis lies between reality as apprehended in presentative experience and fictitious construction or fiction in representation. The term imagination may be properly applied to the process, but makes an awkward name for the product. The test of a fiction is its non-accordance with presentative experience. A concrete object which has no prototype in nature, an hypothesis as yet unverified, an event expected but not yet come into experience, ideal standards by which experience is measured—all are fictions and entitled to be regarded as products of the constructive powers. When they become realised in experience, though still as to their origin products of construction, they receive a new and different value from being expressions of facts in nature (nature as matter or nature as mind) and are entitled to be placed in other groups of mental products.

§ 17. The symbolical character of fictions is oftentimes obvious. A type of a species stands for many individuals embraced in that species; an ideal line or triangle symbolises all linear and triangular figures; ideal pictures of houses, streets, noise and bustle of busy life, symbolise to us the city we have never seen; an ideal of a beautiful landscape is a representative of a vast multitude of agreeable experiences that we have had; an ideal of moral excellence, a symbol of an indefinite number of sentiments and utilities that have come within the cognisance and experience of ourselves or our ancestors. So also the pictures of heaven upon which the mind fondly dwells; and so also the ideal we form of a Creator whom we can love, and worship, and trust. Quite prominently too is this fact exemplified in the constructions made to indicate to the mind distances, as that between the planets or the suns; the ideal image of the distance between the earth and Venus, or the moon is a wholly symbolical cognition. Even terrestrial distances are represented in a symbolical construction. The idea we form of the space between one mile-post and another is a creation symbolising certain experiences we have had of passing between mile-posts, or going over equivalent lengths on the road. Finally, when we try to realise that which is a mere negation, we do so only by a positive symbolical idea. Infinity is made a subject of predication only by a finite positive symbolical image purely fictitious.

§ 18. There can be no doubt that the study of mental fictions is highly important, and even indispensable to the progress of psychological science. To determine the relations of these products to presentative knowledge, to ascertain how far they can be verified, and according to what laws they are formed; to discover to what extent they can be relied upon as giving information of what is beyond, or has hitherto been beyond, presentative experience are desiderata as great as anything which can be suggested in connection with the science of mind. Some of the most important interests of human kind are here involved, and the prediction may be ventured that perhaps the most valuable work of the future in psychology and metaphyics will be done by those who devote themselves to the investigation and elucidation of the constructive fictions of the intellect.

§ 19. To recapitulate: Fictions are intellectual constructions which are not as wholes in exact conformity with a prior presentative experience. They are of five degrees of complexity, and embrace specifically, ideals of beauty, truth, and goodness, much *à priori* cognition, hypotheses and anticipations of the future, all these making up and including the most prominent groups.

CHAPTER LIII.

DEFINITIONS AND DIVISIONS.

DEFINITIONS.

§ 1. A DEFINITION is a proposition declaratory of the meaning of a word: this is the clearest statement of what a definition itself is, and yet the process of definition and its psychological import need some further explanation. With that process, as a process, we have no other concern here than to refer to it to the extent necessary to make apparent the exact position of definitions as products, inasmuch as the process is not different from the general processes of mental actions which have been expounded to the degree of which the ability of the writer and the necessities of the subject admitted. A word is simply a mark, and, as has been elsewhere seen, its meaning resides in its connotation. Connotative names, then, are those which allow of definition: non-connotatives are not subject to the process. But although definition is a matter of the declaration of the meaning of a word, since words are representatives of ideas, explaining a word's signification involves some sort of psychological process. Since those names which admit of connotation are general names standing for concepts, it is apparent that whatever mental process takes place is in and upon concepts. Furthermore, since definition is not an enumeration of individuals, it must have relation to the intension rather than the extension of a general notion. So that psychologically considered the process is one of unfolding in propositions the intension of a concept. This requires a decomposition of the general notion into lesser generalities, a breaking up of the same into groups of homogeneous particulars until the whole notion is laid out in order. And as each lesser generalisation is made it is marked off or separated from something and the whole is contrasted with something, so that additional definiteness may often be obtained by noting the generalised properties of those things with which contrasts are taken in the process of generalising the particulars of the concept whose definition is sought. Where a notion is composed of several notions which are distinct and well generalised, the work of definition is much simplified, for it is only necessary to state these subordinate notions. If, however, the general notion is composed of a mixture of indistinct, partly generalised and non-generalised particulars, the ultimate particulars have to be examined more closely, and new subordinate generalisations constructed and distinguished from each other. Definition, therefore, is a process of association within the compass of a larger association; it is a process of combined analysis and synthesis, analysis in separating a general notion into its particulars and synthesis in remitting those particulars into subordinate general notions. Where the notion is composed of other well-defined notions, the method of analysis is the more conspicuous, because the synthesis into subordinate generalities has been performed before, and the association is so firmly established as to be more machine-like. If, however, the notion is composed of particulars not well assimilated, the synthetical process being slower and more troublesome is the most characteristic part.

§ 2. Definitions may be divided into three classes: Complete Definitions, Incomplete Essential Definitions, and Accidental Definitions. The first of these embraces those definitions which exhibit the whole proper intension of a concept; the second those which declare a portion only of that intension; the third those which express necessarily no part of that intension, but are simply descriptions.

§ 3. Complete definitions are the exhibitions of the essential intension of concepts; that is to say, of the scientific intension. Names have a different connotation with different people and at different times; they may and do connote with some things which are in no wise a part of the essential intension of the concept they express. The scientific intension is that which becomes attached to the concept as the result of careful comparison, analysis and synthesis, to determine what is the essential character of the concept; that without which it would cease to be the concept and would be something else; and that which in no wise belongs to it as essential, but rather is to be attributed to some other notion. To declare this scientific intension is the office of a complete definition. Complete definitions include all that is essential, and exclude all that is not essential. It is evident, therefore, that to form a complete definition is a matter of difficulty. It requires a scientific knowledge of that which is defined. It demands both an acquaintance with the exact state of present knowledge upon the subject and an assurance that the knowledge is complete and final. In this view there are no absolutely complete definitions. But those may be called complete, relatively speaking, which give whatever present scientific information we have concerning that which is defined, which is essential. For instance, the definition of *living bodies* so far as it can be called complete would be something like the following:--*Living bodies are those bodies which are constituted chiefly of carbon, hydrogen, oxygen, and nitrogen, and less abundantly of phosphorus, calcium, sulphur, chlorine, fluorine, sodium, potassium, iron, magnesium, and silicon; which possess an organised cellular structure; which have a definite individuality, and yet a vast variety of forms and structures; which exemplify a definite combination of changes simultaneous and successive, and a continuous adjustment to external circumstances; which assimilate the latter to their own organisation and adapt themselves to the external; and which have in many instances the concomitant of mind.* This definition may be expressed less concisely; and many others would require a still longer and more complex definition. Complete definitions—those which fairly may be ranked as such—are very few as compared with the number in the other classes.

§ 4. The most of those definitions which are accounted as proper definitions and are given and accepted as such, where there is occasion for definition, are what have been termed Incomplete Essential Definitions. These are substantially of use, not to give a complete, adequate, or scientific exhibition of that which is to be defined, but to furnish criteria for the correct use of the term, to mark out the limits of the extension of the concept, rather than to give the sum of its intension. They are always, however, a part of the scientific connotation of the name which is the subject of definition. Thus, *Matter is that substance which has the property of tending to remain at rest if once at rest; Life is the continuous adjustment of internal and external relations; Living bodies are organised bodies; Man is a rational animal; A dog is a vertebrate animal; A stone is inorganic matter; A house is something built*—are severally incomplete essential definitions.

§ 5. The third class of definitions comprise what are otherwise known as descriptions, and are hardly to be considered as definitions at all; that they are not scientific definitions is clear, yet as they do actually express the ordinary popular intension of concepts, and as this loose accidental intension may really be an unrecognised part of the scientific intension, or may become a part thereof, it is not wise to omit descriptions in treating definitions. Like the last division, this class is of value for the purpose chiefly of enabling us to discriminate objects and to employ terms correctly. Descriptions raise in the mind the idea which it is desired to call up; oftentimes they are of great importance in classifying; by their use in the latter connection they may even become essential definitions, if the classification itself become essential. Among accidental definitions may be indicated, *Virtue is that which avoids vice; Man is bipes implume; A church is an edifice containing an organ; New York is a city at the mouth of the Hudson River; Lightning is that which blasts trees and houses in a thunder-storm; A jackass is a creature that brays.* Of this class may also be reckoned definitions by synonyms. *Pleasure is happiness* may be considered an accidental definition of *pleasure*; it is a part of the accidental intension of the concept *pleasure* that it has the name *happiness*: so also *A building is an edifice; The Logos is the word; A man is a human being; A youth is a young person.* Most of the definitions we have (so called) of abstract names are of this character. As among complete definitions are to be placed the most elaborate, exact, and perfect, so among the accidental are to be ranked those most imperfect, most inexact, least approaching the requirements, and least subservient of the purposes of definitions. Among the cultivated, complete and incomplete essential definitions are chiefly in requisition and use; among the vulgar accidental definitions are the only kind employed, for the most part.

§ 6. Having noted the different kinds of definitions, we will next inquire what may be made the subjects of scientific or complete definition. In general it may be said that any name having connotation is capable of complete definition. Singular names cannot be thus defined. Such names as *Charles* as applied to an individual man, *Carlo* as applied to a dog, *London* as applied to a city, *Atlantic* as applied to an ocean, are not subject to scientific definition. Some names however, which are the designations of individuals, have also a general character. The *Shah of Persia, The present head of our nation, The man who slew Henry IV., The house that Jack built,* are names of individuals, but have also general meanings arising out of the generality of component parts of the names. These general meanings can be declared in definition, but the names as wholes denoting individuals are not properly definable except in the descriptive manner alluded to under the head of accidental definitions. The same law is applicable to abstract names; those having a proper connotation may be completely defined if we can ascertain the full connotation. *Whiteness is colour*, *Honesty is virtue*, *Pastness is time*, are essential definitions, and complete, if we suppose that by these expressions the connotation of the respective subjects is exhausted. But those abstract names standing for abstracts having no intension are not definable: definition deals wholly with general names.

§ 7. It is an error to suppose that definitions add to our information concerning things. They merely unfold and make clear the knowledge we already possess. Sometimes, however, in connection with a definition is implied an assertion of fact which is an addition to our real knowledge. *Whiteness is colour* may be regarded as implying that whiteness exists; this is an assumption made *with* the definition, but is not a proper part *of* the definition. In the process of definition also, suggestions through association may be made which are items of additional knowledge or which may lead to such knowledge and thus increase our information concerning the subject. But, except in these ways, all that definitions can accomplish is to systematise, limit, and make more vivid our knowledge already acquired. Not all the definitions we might give of any simple experience could cause us to know what that experience is without our having experienced it; but having had it and others like it, a definition may assist us in preserving them and enable our mind to recall and renew them. Nevertheless in their office of explicating concepts definitions are an exceedingly important product of mental operations.

§ 8. It may be useful to enumerate briefly some received rules for definition, the reasons for which will have been already made apparent. (1) A definition should state the essential attributes of the species defined; (2) A definition must not contain the name defined; (3) The definition must be exactly equivalent to the species defined; (4) A definition must not be expressed in obscure, figurative, or ambiguous language.

DIVISIONS.

§ 9. Divisions are terms expressing the extension of concepts; the process of division is that of laying out in order the extension of a general notion. Like definition, it is a process of classification. Division proper is thus the separation of a general whole into parts composing its extension, as when we divide animals into men, birds, quadrupeds, etc. There is another kind of division so-called, which is denominated *partition*, being the separation of a whole into integral parts by a process of dismemberment, as a house into brick, mortar, wood, etc.

§ 10. Divisions are ranged in series, the terms of which stand to each other in the relations of genus and species, proceeding from a *summum genus* to an *infima species*. The common rules of division are: (1) Each of the parts must contain less than the thing divided; (2) All the parts together must be exactly equal to the thing divided; (3) The parts must be mutually exclusive; (4) The division must be founded upon one principle or basis. Where species overlap and interfere with each other, the division is called a *cross-division*. These rules are for guidance in forming the most complete and useful divisions. There is the further general principle that it is of the highest utility in classifying that divisions should be made according to the most important and essential differences and agreements in the things arranged in serial order. We find it an end of division (and of all classification) to bring together in thought those objects which have the greatest number of common properties, and those whose simultaneous consideration will best elucidate the problems of scientific inquiry which may be suggested. The purpose of all classification is to store away, in the best shape for ready use, the knowledge we possess, and thus to make room for the easy reception of more.

§ 11. Divisions may be broadly characterised as Natural or Artificial. Natural Divisions are those which seem to have been marked out by nature, and are based upon differences in Kinds. A Natural Kind is a division of objects, which have a large, indefinite, and perhaps inexhaustible number of common features. *Man*, for instance, is a Kind, there being an indefinite number of common properties which unite objects into that class; *white man* is not a Kind, since the only property connoted by the term *white* is *whiteness*. Kinds are those large important classes in nature whose common characteristics are numerous enough, and whose points of difference from other things are marked enough, to give to the class a specific and prominent individuality. It has been properly said that where the distinction between things is not one of kind, we expect to find their properties alike except where there is some reason for their being different. On the contrary, when the distinction is in kind, we expect to find the properties different unless there be some cause for their being the same.[1] Differences in kind are radical, and cannot be disregarded; differences not in kind can be overlooked when the purpose for which the difference is noted ceases to be of moment. Where these natural divisions are ranged in groups, bearing to each other the relations of higher genera to lower, we have a natural classification; the higher groups may not themselves be Kinds, but will contain those kinds which have the closest resemblances—the general order will still be a natural order. Such are many of the divisions of genera and species in botany or zoology, the division mammalia, the chemical elements; the division metals and non-metals, animal and vegetal. The most complete example of a natural series of divisions is perhaps to be found in zoology, in the great classification terminating in vertebrates and invertebrates.

§ 12. Artificial divisions are those made, irrespective of natural kinds, when any specific purpose makes an orderly arrangement, useful or necessary. If I classify the books in a library by placing in one lot those bound in cloth, in another those bound in sheep, in another those bound in morocco, the divisions thus made are artificial. So if I divide houses into red, white, brown, cream-coloured; so if men are graded according to their height, laws according to the years of their passage, food according as it is cold or hot. That artificial divisions are of value is evident. There may be purposes for which it is important that books be divided according to their binding, or men according to their height. Frederick of Prussia for his pet regiment of tall men found it desirable to make the latter sort of distinction. The editor of a collection of statutes may need to group in one class those acts which became laws in a particular year. So there are purposes arising all the time for which artificial divisions are indispensable. In the general scientific treatment of a subject, artificial divisions are only to be adopted as aids for securing a natural classification, or as a substitute therefor where the state of knowledge has not so far advanced as to make the natural groups clear. Artificial classifications, as history and laws, have been adopted provisionally, and have for the most part given way to natural. The Linnæan system in botany exemplifies artificial divisions which have maintained their hold in a remarkable degree. The divisions of mental science according to the so-called faculties give illustration of artificial divisions. In the classification of minerals according to Weiss we have a conspicuous instance. But in general, aside from their office of furnishing provisional classifications, artificial divisions are of use in minor matters related to some practical purpose in a limited sphere. Indexes and pigeon-hole arrangements are characteristic examples.

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[1] Mill, *System of Logic*, Classification, Sec. 4.

§ 13. The separation of divisions into natural and artificial makes only a relative distinction. Artificial divisions are natural in the sense of there being natural differences in the objects according to which divisions are made; nevertheless, these differences are in the midst of things which have a great number of agreements in other particulars sufficiently striking to throw individuals together in thought, spite of the minor differences which are also observable. All objects have differences *inter se et inter alia*; they have also agreements, and when the latter are numerous and important, the associative powers represent more frequently and surely objects perceived, in classes made according to the most numerous and most important agreements; classes formed according to lesser agreements and differences do not recur to the mind so frequently, and are made use of only for particular objects. It requires no effort or special motive to view things in natural divisions; it demands effort or special motive to regard them in artificial divisions. And the boundary line between natural and artificial divisions thus explained is not always determinate. Whether the class under consideration at any time is or is not a natural kind, cannot always readily be divined. That which once is made out to be a kind does not invariably remain a kind in the progress of discovery. Yet if the distinction thus drawn between the natural and artificial be an indefinite one, it is still sufficiently clear to be indicated, and sufficiently valuable to be preserved.

§ 14. Classifications based on natural divisions may also contain artificial divisions, and those which are mainly artificial may also embrace subordinate natural divisions ranged in natural order; and the same object may stand, or be capable of standing, in many divisions both natural and artificial.

§ 15. There is a process of exhaustive division called Dichotomy, which aids proper classification by a sort of differentiation which prevents hasty and confused groupings of things into classes which should not be formed, and guards against omissions and oversights in a very perfect manner. If we have for division the concept *man*, having an extension composed of individuals whose differences are undetermined, and we are able to associate together in a class by distinctive characters a certain number, we can divide the whole concept into two divisions—the ascertained on the one side and the unascertained on the other. Thus if we form a class embracing those individuals having the characteristics of Caucasians, we may divide man into Caucasians and not-Caucasians; again differentiating, we may divide not-Caucasians into Mongolians and not-Mongolians; again, not-Mongolians into Malays and not-Malays; and so on. This method of division was extensively practised by Plato, and is recommended highly in his works. It provides a place for everything which remains to be discovered, and in this respect excels all other methods of division; but it is of no great value unless controlled or supplemented by methods which enable us to fix more definitely common characters, and to associate in higher generalities the objects possessing them. By dichotomy we may take out separate parcels from a confused mass, but to perfect scientific division the parcels taken out must be compared, their similarities and differences ascertained, and classes formed upon the basis of those resemblances; for this latter office dichotomy is of no use, though it prepares the way for the accomplishment of such a work.

§ 16. A special word upon the divisions of abstracts will not be out of place, since it may serve to impress more fully upon the reader the error (whose correction has before been attempted) of confounding the division with the definition of abstract names. In many general abstracts divisions of the extension could only be expressed by numbers, since the differences would be too numerous and too delicate of apprehension to admit of any other method of naming. We could not otherwise name all our different experiences of *whiteness*. But in the case of the higher abstracts whose extension is itself made up of abstracts, the latter can be enumerated and form divisions. Thus *colour* has the divisions *whiteness*, *redness*, *blueness*, and so forth; *virtue* has *courage*, *honesty*, *chastity*, *truthfulness*, etc.; *fault* has the division *hurtfulness* (not the definition), *time*, *pastness*; *honour* has *probity*, *uprightness*, *integrity*; *selfishness* has *greed*, *knavery*, *heartlessness*. It is often a difficult task to determine of two abstracts which may be considered as inclusive of the other; and abstracts expressed by the same name often may be regarded as parts of the extension of more than one higher abstract. The divisions of abstracts are really partitions and not divisions proper, so far as we regard abstracts as being without intension. Thus while *whiteness No.* 1, *whiteness No.* 2, *whiteness No.* 3 may in one view be regarded as divisions proper of a concept-abstract whose intension is expressed by *colour*; on the other hand *whiteness*, *redness*, *greenness* are partitions of an abstract *colour* which is without intension.

§ 17. There is a close interdependence of divisions proper and definitions. Divisions are marked out and characterised by definitions. The third rule of definition (§ 8) demands that the definition correspond exactly to the species defined, being neither narrower nor wider. Every definition implies division, and every division has need of definition unless it be the result of a partition. We distinguish by definitions, and define things distinguished.

§ 18. To sum up:—Definitions proper are propositions declaratory of the intension of concepts; as such they are Complete or Incomplete. In addition there are Accidental Definitions or Descriptions, in distinction from which incomplete definitions that are definitions proper are termed Incomplete Essential Definitions.

Divisions are terms expressing the extension of concepts. To these are added Partition, or divisions resulting from dismemberment of a singular notion, or of a notion essentially regarded as singular. Divisions are classed as Natural and Artificial according as they are or are not based upon natural Kinds.

CHAPTER LIV.

ARGUMENTS.

§ 1. THE nature of inference in general has been made the subject of discussion in a preceding chapter (Chap. XXXVIII.). It is now necessary to examine the distinctive products of inference. In the former chapter we found inference to be representative cognition at bottom, and to be distinguished only as one phase of that of which belief and memory are other phases. It was also seen that inference is indispensable to cognition, and takes place from the dawn of consciousness. But while all the products of cognition are in a sense products of inference, there are some to which the processes of inferring give the superior characteristics and which are hence *par eminence* products of inference. These are the preserved operations and consequents of what is generally embraced under the name Reasoning—those in which a cognition is before the mind as connected with another cognition following from it; in which, in other words, certain cognitions known as premisses are associated with certain others known as conclusions.

§ 2. In the former chapter it was shown that there is no essential difference between what are commonly called immediate and mediate inference. All inference at the last resort is pronounced agreement in difference, and mediate inference is only a discursus by which objects are brought forward into the mind for identification with others. This being the case, what is termed immediate inference is not reasoning at all; the recognition of similarities and differences is not reasoning, but the latter is the process by which objects are marshalled for the former. If this view be correct, we shall have the term *inference* to express the general and comprehensive operation of the mind which is the foundation and explanation of all reasoning, while the latter name will be convenient to apply to that progress of the mind which is made from one judgment or more to others and others, uniting them all, and carrying over to the last what was in the first, each reciprocally affecting the other. The inferences called immediate by the logicians have been sufficiently illustrated; the products of reasoning are larger and more cumbrous aggregates of cognitions which must be exhibited together in order that the relations between them and the processes of the mind may be apprehended. (See Chaps. XXXVIII. and XLII.)

§ 3. Having endeavoured to fix a more precise meaning to the term reasoning, we may now proceed in our study of its peculiar products. These are Arguments; an argument is a process of reasoning expressed and preserved in words. It consists of two parts: the thing proved, or the *Conclusion*; and that by means of which it is proved, or the *Premisses*. The premisses are sometimes termed also the *Reasons* which support the conclusion. Some writers restrict the word argument to the reasons which substantiate a given result, as when they speak of this, that, and the other as good arguments to prove a point. In logical technicality *argument* is often employed to denote the middle terms of syllogisms. But there is great advantage in considering together premisses and conclusion as constituent parts of the same product, for neither has any meaning as illustrating or exhibiting the reasoning process without the other. Every argument is an argument for something, and if we take no note of the conclusion the character of the premisses as premisses is lost. We will hence regard arguments as including both premisses and conclusion.

§ 4. Arguments may be reduced to two general forms, which are generalisations that may be placed at the foundation of all reasoning: they may be called fundamental laws of reasoning. Every argument implies an agreement or difference between two things, and also a permanence or continuity of experience. We have hence the two following fundamental laws:—

> *First. B has followed or co-existed with A; B will follow or co-exist with A. What has uniformly been in the past will be in the future.*
>
> *Second. B is like A, and in so far as they are alike the one may be substituted for the other. Things agreeing with the same thing agree with each other.*

Every argument is dependent upon the truth of these canons. To say that B has followed A and therefore B will follow A is not conclusive unless we assume that the B of one moment is the same and convertible with the B of the next, the A of yesterday with the A of to-day. We really say B B′ B″ B‴ has followed A A′ A″ A‴; the conclusion that B has followed A implies that B B′ B″, etc. are equal to each other and interchangeable; so also A A′, etc., otherwise B has not followed A, but something not B has followed not-A and confusion is inevitable—in fact, all basis for knowledge is destroyed. On the other hand we cannot say that B is like B′, or A like A′, or A like B, unless they continue in consciousness for comparison, unless they are first *there* to be compared. But their continuity implies that what is has been, and what has been is; in other words, that what has been has been repeated, and the suggestion of the one brings up the other also. And we cannot say A′ will be like A, B′ like B, or B like A without postulating that A′ will follow A, B′ will follow B, or B will follow A.

The necessary interdependence of these basic inferences is still further illustrated in examining the course of the extension of knowledge. To say that B will follow A since B has followed A, yields nothing unless we are able to identify and associate other things as C, D, E, F, with A and B, and affirm of C, D, E and F what we affirm of A and B. This, however, we can only do by the second principle above given, the substitution of similars or the canon of mediate inference. Again, to reason that A agrees with B, and may be substituted for it, is of no value unless the reasoning can be generalised and it may be asserted that everywhere and under other circumstances in the future as well as at present A = B; to establish this latter we must have recourse to the general axiom of the uniformity of nature.

Based then as these two methods of reasoning are upon laws of the mind which express processes thoroughly interwoven with and dependent upon each other, the two processes are nevertheless separately traceable, and are in certain senses the inverse of each other. The first commonly leads from judgments relatively particular and individual to those more general and universal, and is called Induction; the second leads from judgments universal or general to those relatively particular, and is called Deduction. But neither, as will more fully appear, can advance a single step without the other.

INDUCTIVE ARGUMENTS.

§ 5. An inductive argument is one which generalises conjoined properties on the observation of individual instances. If from the observation that robins, sparrows, eagles, chickens, blue jays, ducks, swans, parrots, and larks, all of which I have seen, have feathers, I then infer that all birds have feathers, I make an inductive argument. It may be expressed in the form—

Robins, sparrows, eagles, etc.—all the birds I have seen have feathers,
All the birds I have not seen have feathers,
All birds whatsoever have feathers.

Or, to use another illustration, I may argue from many experiences that lightning always will be followed by thunder.

In one, two, three, etc. instances I have observed, lightning has been followed by thunder.
In all the instances I have not observed the same sequence occurs.
In all instances whatsoever lightning is followed by thunder.

It will readily be conceived that inductive arguments may be of great variety: the foregoing exhibit only simple instances. In those that are given, as in all others, the question is, How are we enabled to infer from the known to the unknown? Why is it that I conclude from the observed fact that certain birds have feathers, that all birds will have feathers? The answer is that we have learned to depend upon certain uniformities of nature which teach us that in the case before us the same uniformity which has prevailed will prevail. On the warrant of a larger inductive generalisation we make the present inductive argument, Whatever has been, will be.

§ 6. This being the method of inductive argument in general, how are we to know in a given case that such reasoning is valid ? Induction may take place at any time and with reference to any objects, but it may not be trustworthy. I may see an *elater* beetle when on its back regain its usual posture by a spring into the air ; whence I may reason that all beetles under similar circumstances will do the same thing, whereas the fact is they will not. I may conclude that certain pills a physician gives me cure my dyspepsia, though the fact be that the pills had no virtue whatever, and my cure is owing to entirely different causes. It might be said that a multiplicity of instances agreeing is our warrant for believing in the certainty of the conclusion. But some inductive arguments founded on the observation of immensely long series of observed and uncontradicted instances fail of validity and are known to be invalid, while others founded on a single observation are true and so cognised. Or in some cases a single exception is enough to defeat the argument, while in others it holds true notwithstanding a multitude of apparent exceptions. Some savages infer from the firing of a gun that death will ensue, and run equally from a gun loaded with powder only and one loaded with ball, or whether it be pointed at them or be fired at random. A single carefully made experiment will establish a new fact in nature without necessity of its being repeated except to give assurance that the steps of the process are genuine. It was for a long time argued from a multitude of particulars that all crows were black ; exceptions have been found, and the induction is destroyed. That bad air is deleterious is held true, though many cases occur wherein no injury can be shown to have occurred to those who have breathed it. To determine then what inductions are valid and what invalid is a problem as important as it appears to be difficult.

§ 7. In the first place no inductive argument gives us a conclusion *absolutely* certain. We have no means of *knowing* the future but by experiencing it as it becomes present, none of knowing the unknown except by knowing it. Nevertheless where a series of uniformities has been observed, in thinking of one of the series its antecedent or consequent is represented ; we cannot help thinking that if A has been followed by B, A will be followed by B. And in proportion as the prior uniformity is perfect and unbroken with the greater perfection of uniformity is the series or sequence projected into the future. Secondly, therefore, wherever an inductive argument fails, it is through imperfection of apprehended uniformity, else its failure would have been anticipated and the argument never would have been received as valid. Either some uniformity was not apprehended, or what was esteemed a uniformity was not a uniformity, or both. In order then to attain the highest certainty of induction, it is necessary to have as thorough and complete a chart of the uniformities of nature as it is possible to have. The great task then of induction is to ascertain and exhibit the uniformities of nature, or, as they may be otherwise denominated, the laws of nature.

§ 8. There are two methods of searching out uniformities in nature which are respectively known as observation and experiment. Sir John Herschel very properly remarks that these two differ in degree rather than in kind, and that the terms passive and active observation might better express the distinction. Prof. Bain says that Observation is *finding* a fact, Experiment is *making* one. By experiment we may multiply facts, we may obtain what facts we need for the purpose in hand without being obliged to wait for their occurrence in nature. For these reasons experiment has played a very prominent part in the extension of knowledge by induction. Undoubtedly some of the most important laws of nature would still be undiscovered had it not been for experiment. We should have known much less of chemistry, of the laws of electricity, magnetism, mechanics and acoustics, had men not resorted to experiment. For a third reason experiment is superior to observation, namely, that in the former we can know and regulate the surroundings so as to estimate the better all disturbing effects, and bring under better control the agents to be observed. We can produce in the laboratory electricity in sufficiently weak degree to admit of our observing its effects with care and in detail, while as it is displayed free in nature it is too powerful for such purposes. As a mark of the higher importance of experiment over observation we can point to the greater advancement of those sciences, as chemistry and physics, wherein experiment has been employed over those, as biology and sociology, where it has not been or cannot be introduced to a prevailing extent.

§ 9. The uniformities of nature with which inductive arguments are chiefly concerned are those of cause and effect. Uniformities of order in place may be observed and classified, but their uniformity is dependent upon uniformities of cause and effect. Trees are uniformly found growing on land and fishes living naturally in the water, but an investigation of the laws of cause and effect as applied to vegetal and animal life will develop the same uniformities in connection with uniformities of sequence. So also most of the uniformities arising in co-inherence of attributes may be disclosed in an investigation of cause and effect. So also those of quantity and quality. But some co-existences may be uniform throughout nature, though not resolvable into cause and effect; so far as we can see, it is desirable to mark the uniformity, though afterward it should be found a uniformity explicable under the laws of cause and effect. We must hence regard such cases as uniformities of co-existence. The most prominent and most distinctively representative examples are the connection of mind and body, and of gravity and inertia in matter.

Uniformities of simple order in time are of consequence only when we cannot refer them to uniformities of cause and effect. It is obvious that uniformities of cause and effect are of paramount value as results in the investigation of laws of nature. The obviousness consists in the plainness of the fact that we are searching for the most perfect uniformities, and that the uniformity of cause and effect is the most complete uniformity of which we can have conception. For the connection of cause and effect is an invariable and unconditional sequence. The antecedent is followed by the consequent, not only without variation but independently of everything else save the antecedents of the antecedent. In order to reach the highest certainty of the inductive argument we must have an ascertained sequence of this character. Uniformities of order in time then may be merged in uniformities of cause and effect, or if not they are of only temporary and makeshift value, and cannot furnish a ground for a complete induction.

§ 10. To find the uniformities of cause and effect in nature is therefore the main work to be accomplished in the determination of what inductions are valid and what are invalid. For the ascertainment of these uniformities, logicians have formulated certain laws or canons which express general results of experience, and which may serve as guides to procedure and standards of measurement. In this work no more can be done than briefly to enumerate these canons. Induction is a subject of vast complexity, and its treatment is the most extensive and difficult department of logic. With it we have no concern here, however, except in its most general features. These formulas have been called laws of the Four Experimental Methods, and are exposed in five canons.

§ 11. *First Canon of Induction. Method of Agreement. If two or more instances of the phenomenon under investigation have only one circumstance in common, the circumstance in which alone all the instances agree is the cause (or effect) of the given phenomenon.* In other words, *The sole invariable antecedent of a phenomenon is probably its cause.*

If we have an antecedent A and a consequent a we desire to ascertain if there is an invariable uniformity of connection between them. We find A in conjunction with various other phenomena here designated B, C; we also find a in connection with other phenomena b, c. In another instance we find A in conjunction with B, D and a with b, d; in still another we find A with C, E, F, and a with e, f.

Taking the three instances, we have—

Antecedents A, B, C, followed by consequents a, b, c.
" A, B, D, " " a, b, d.
" A, E, F, " " a, e, f.

Now wherever we have a consequent a, we have an antecedent A; in the second case we have a consequent but no C antecedent; in the third we have a consequent but no B antecedent; in the two first we have a consequent but no E, F antecedent. All the instances agree in having A followed by a, and in this alone. Hence there is an invariable causal connection between A and a.

A concrete example is found in a case by which Sir David Brewster proved that the colours seen upon mother-of-pearl are not caused by the nature of the substance but by the form of the surface. 'He took impressions of the mother-of-pearl in wax, and found that although the substance was entirely different the colours were exactly the same. And it was afterwards found that if a plate of metal had a surface marked by very fine close grooves, it would have iridescent colours like those of mother-of-pearl. Hence it is evident that the form of the surface which is the only invariable antecedent or condition requisite for the production of the colours must be their cause.'[1]

§ 12. *Second Canon of Induction. Method of Difference. If an instance in which the phenomenon under investigation*

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[1] Jevons, *Logic*, p. 241.

occurs, and an instance in which it does not occur have every circumstance in common save one, that one occurring only in the former; the circumstance alone in which the two instances differ is the effect or the cause, or an indispensable part of the cause of the phenomenon. In other words, *The antecedent which is invariably present when the phenomenon follows and invariably absent when it is absent, other circumstances remaining the same, is the cause of the phenomenon in those circumstances.*

If we have various sequences, A, B, C, D, followed by *a*, *b*, *c*, *d*, in all of which it is observed that A is invariably present as antecedent when the phenomenon *a* occurs, and we have also various sequences B, C, D, followed by *b*, *c*, *d*, in all of which the absence of *a* is accompanied by the absence of A, causal connection is indicated between A and *a*.

If we strike an animal a blow on the head and unconsciousness follows, whereas no other change in circumstances has occurred, we infer that the blow is the cause of unconsciousness. If a mouse be under a glass and the air be exhausted and the creature dies, no other variation of circumstances taking place, we infer that the exhaustion of the air causes death. If listening to music is followed by a pleasant emotion which ceases when the music ceases, the music is the cause of the emotion.

§ 13. *Third Canon of Induction. Joint Method of Agreement and Difference. If two or more instances in which the phenomenon occurs have only one circumstance in common, while two or more instances in which it does not occur have nothing in common save the absence of that circumstance, the circumstance in which alone the two sets of instances always or invariably differ, is the effect, or cause, or a necessary part of the cause of the phenomenon.*

If we have a set of sequences A B C followed by *a b c*, A D E followed by *a d e*, A F G followed by *a f g*, in which A followed by *a* is the only circumstance in common, and a set of sequences as P Q followed by *p q*, R S followed by *r s*, in which there is nothing common except the absence of A followed by *a*, we infer a causal connection of the last two.

'Thus if it be true that all animals which have a well-developed respiratory system and therefore aërate the blood perfectly, agree in being warm blooded, while those whose respiratory system is imperfect do not maintain a temperature much exceeding that of the surrounding medium, we may argue from this two-fold experience that the change which takes place in the blood by respiration is the cause of animal heat.'[1]

§ 14. *Fourth Canon of Induction. Method of Residues. Subduct from any phenomenon such part as is known by previous inductions to be the effect of certain antecedents, and the residue of the phenomenon is the effect of the remaining antecedents.*

If it be known that the joint effect of A B C is *a b c* and that A is the cause of *a* and B the cause of *b*, by the method of residues we infer that C is the cause of *c*. If we weigh a load of hay and find it to weigh a certain amount, and then weighing the cart find the weight of the cart ; subtracting the weight of the cart we know what is the weight of the hay alone. So if at a fire some articles are damaged by the fire and some by the water used to quench the conflagration, and we subtract the damage known to have been caused by either one from the whole damage, we shall have the damage caused by the other.

§ 15. *Fifth Canon of Induction. Method of Concomitant Variations. Whatever phenomenon varies in any manner whenever another phenomenon varies in some particular manner, is either a cause or an effect of that phenomenon or is connected with it through some fact of causation.*

If we discover that when A is double *a* is double, when A is halved *a* is halved, when A is quadrupled *a* is quadrupled, we may infer a causal connection between A and *a*. If we carry a barometer to the top of a mountain, and notice the progressive rise of the mercury with increasing height, we argue a causal connection between pressure of the air and the rise and fall of the column.

§ 16. It is apparent that the five methods thus given are not five different methods any one of which can be applied to all facts; but that some are applicable to some phenomena and others to another set, while each in turn is inapplicable to some phenomena. The method of agreement is particularly applicable to those cases where experiment is impossible. Its certainty, however, is impaired by the fact that the same effect may in different instances be owing to different causes. If we have A B C followed by *a b c* and A B D followed by *a b d*, by the method of agreement we infer that A is the cause of *a*. But we are not certain that in the first case A B may not be the cause of *a*, while in the second A only is that cause. The method of difference is free from this defect. For if *a* is uniformly preceded by A and when A is absent *a* is also absent, we know that A has something to do with the production of *a*, is at least *one* cause of *a*. The characteristic imperfection of the method of agreement is lessened somewhat by a multiplication of instances, the probability of A being the cause of *a* being increased by a large number of cases wherein A is the sole invariable antecedent of *a*. The greater the variety of the other factors of the antecedent than A the more is the certainty enhanced. Again, the observation of agreement between A and *a* is an indication to try whether *a* can be produced from A, in other words to apply the method of difference. Whenever this can be done, it is an indispensable supplement to the method of agreement. A third way to obviate the unreliability of the first method is to note agreement in absence, or to apply the joint method of agreement and difference. In this method it appears that the instances containing *a* agree only in containing A, and that the instances wherein there is no *a* agree only in not containing A. If then we suppose there were any other cause of *a* than A, as B, in the instances in which *a* does not occur, B must be absent as well as A, and it would not be true that these instances agree *only* in not containing A. In order then to make of the highest advantage the method of agreement we must, (1) multiply and vary the instances as much as possible; (2) apply the method of difference in experiment; (3) apply the joint method by noting agreement in absence.

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[1] Mill, *System of Logic*, p. 228, Harper and Bros. Ed. 1848.

The method of difference is the most perfect method of determining causal connection, but is far more limited in its application than is the preceding method. In order to use it we are obliged to find (or make) two instances which correspond in every particular except the one which is the subject of inquiry. Where, therefore, experimentation is not practicable, we are forced to wait till we encounter such correspondent instances in nature, and it may be a long time before we meet with them. So that in those branches of knowledge where experiment cannot be made, as in sociology and ethology, the method of difference is not to a great extent available; though from this fact we are compelled to put up with a less degree of argumentative certainty than if we could use it. In the physical sciences, however, this method has been by far the most important instrument of proof and discovery.

Where the method of difference cannot be employed we must rely upon the other methods. The joint method can be used in some cases where the method of differences is inapplicable. If we observe various cases in which *a* occurs, and find that they have in common only the circumstance A, we have a proof by method of agreement. In order to confirm this proof by the method of difference, we should need to in some cases leave out A and observe if this omission be followed by an absence of *a*. We may not be able to do this ; the next best thing to do is then to observe a number of cases wherein *a* is not, and find them to agree in the absence of A. This will fail to give us the certainty of the method of difference, for we cannot be quite sure that the affirmative instances of *a* occurring agree in no antecedent whatever save A, nor that the negative instances of *a* not occurring agree in nothing but the negation of A. If we could have this assurance, there would be no need of the joint method at all, for the causation would be proved without it. But the method is valuable as giving us a greater certainty than the simple method of agreement, by extending its application. The method of concomitant variations has great utility in many places where the method of difference cannot be employed. For instance, in the investigation of the effects of heat. If we could examine a body with its heat, and the same body without its heat, by the method of difference the effect might be ascertained. But we cannot remove from any body the whole of its heat. In this difficulty the method of concomitant variations comes to our rescue, and applying it by noticing the effects arising from an increase and decrease of heat, we may estimate the causal connection.

The method of concomitant variations has a value independently of its office as a supplement to the method of difference. Where the quantity of an effect is to be measured (and exact science depends upon quantitative estimates) and connected with a given quantity of its antecedent, this method is called into requisition in showing causal connection. It may sometimes also in this way follow after the method of difference is employed to complete the quantitative precision of the result that has been reached by that method.

The method of residues is of chief consequence in completing inductions which have proceeded according to the other methods, by taking a short path superseding the necessity of going over the more circuitous route of new observation and experiment. Very important results have been reached in astronomy by this method. The discovery of the planet Neptune was occasioned by the observation of residual phenomena for which the causes already ascertained were not sufficient to account. There was an attraction of Uranus from the place where it should have been according to the operation of the known attractive forces of the solar system.

§ 17. The celebrated example of the fall of dew furnishes a beautiful illustration of the uses of the inductive methods. This, supplemented by some illustrations of the method of residues and selected from Sir John Herschel's 'Discourse on the Study of Natural Philosophy,' is found with comments by J. S. Mill in the latter's 'System of Logic,' Bk. III. Chap. IX.

§ 18. There are some cases in which a bar is presented to the use of any of the experimental methods without a prior preparation of the way. One fact frustrating the method of agreement has already passed under review, namely that of a composition of causes. Another and more serious obstacle to the operation of the methods generally arises from the intermixture of effects. This occurs in two ways: (1) Composition of forces, as in mechanics, in which the separate effects of the forces continue to follow, but are compounded so as to form only one general effect. (2) Chemical union, where different forces operating together cease to produce each its proper single effect, and the general effect is phenomena altogether different from those seen in any single effect. In the second of these cases, however, where a new phenomenon appears as resultant from certain combinations, it may be studied as a new thing produced by its antecedents as agents. This new fact may be subjected to inductive investigation like any other phenomenon, and we are not under the necessity of seeking to trace the specific and particular effects of the antecedents in the view that they are elements composing the consequents. And to discover the constituent causes of such phenomena we are often able to rely upon the circumstances that the new phenomena under consideration will sometimes reproduce their causes. Oxygen and hydrogen in combination produce water, a new phenomenon whose effects are to be studied by themselves not as effects of oxygen and hydrogen. And for discovering the agents whose combination results in water, we are indebted to the fact that from water oxygen and hydrogen can be evolved. Accordingly, chemical union does not afford as perplexing a subject for the study of cause and effect as does mechanical intermixture, as will now appear more fully by examination of the latter. The intermixture of effects of forces, each of which has its own proper operation throughout the phenomenon called the effect, may appear where two forces produce a homogeneous effect, increasing the effect of either alone or varying it, without essentially defeating it. A ball rolling, if impinged by another ball coming up behind it, may have its velocity increased and its direction changed. A pool of water in a rain storm may be enlarged by a dozen torrents from the neighbouring declivities. Or the effect of one cause may be counteracted by another, as if a rolling ball is met by another which stops it or diminishes its velocity.

These examples are from the world of natural forces outside of animate beings. From biology, and especially from politics and sociology generally, still more striking illustrations may be drawn. The effects of agents in producing or counteracting disease exhibit cases of intermixture of effects very difficult to resolve, and who could pretend to trace accurately all the causes of a revolution or even the result of an election? In all cases of intermixture we have certain causes, A, B, C, D, producing not separate and discernible effects, a, b, c, d, but generating a single conglomerate effect, a. How much of this effect is due to each individual agent we may not be able to determine, and unless we can eliminate all the causes but one, we shall not show what is the true causation. If we attempt to apply the method of agreement we may be met by an example of E, F, G, H, followed by a, and we are not able to find any sole invariable antecedent of a. If we discovered that a removal of A reduced a to $\frac{3}{4}a$, and of B to $\frac{2}{3}a$, we might apply the method of difference and conclude that A is the cause of $\frac{1}{4}a$ and B of $\frac{1}{3}a$. But where such removal cannot be made, or where a cannot be divided or measured, the method does not apply. That there are many such cases is evident. We meet with many effects a preceded by an unknown number of antecedents as A, B, C, D . . To all such cases the method of difference is inapplicable. Equally so is the joint-method. We cannot get so far as to find two instances of the phenomenon in question wherein there is only one common circumstance. No more can we find instances which agree in nothing save the absence of a common circumstance. For illustration, suppose we have an effect a, namely, a poor crop of potatoes. We have a discovered antecedent A, namely, a poor soil; a possible cause B, namely, a drouth; a possible cause C, namely, defects in the germs planted; a possible cause D, namely, bugs eating the plant; and a possible cause E, as the failure of the owner to attend church throughout the summer. These various items may be noted as antecedents of the effect *a*. In order to apply the method of agreement, it is necessary to find a number of instances wherein any one of the antecedents named is the sole invariable antecedent. In order to prove a poor soil (A) to be the cause of the poor crop, we must find a multitude of instances in which the same kind of soil has been followed by a poor crop. This would itself be a difficult matter perhaps, but even if such instances were found they would prove nothing, if we found in those instances the presence of other factors, as a drouth (B), defect in the germs (C), bugs (D), non-attendance at church (E). The method is frustrated therefore. We must not only find instances when a poor soil is followed by a poor crop, but we must show that the absence of a poor soil is followed by a good crop, other circumstances remaining the same. We must find an instance where the conditions of atmosphere, germination, all conditions, are precisely the same as in another instance, except that in the former a poor soil is absent and in the latter is present. That this is usually impracticable does not need argument. The method of difference, therefore, will be frustrated likewise by intermixture of effects. In the same way, the joint method of agreement and difference (or, as it is otherwise called, the Indirect Method of Difference) fails, for we never could show that two instances of good crops agreed only in the absence of poor soil; quite the contrary would at once appear. The method of residues, being a supplemental method, could not be employed unless we first had ascertained the effects of the other causes, as drouth, defects in germs, etc. (B, C, D, E). By the method of concomitant variations, if we could vary the cause A, that is, change the quality of the soil and note a measurable difference in the quality of the crop, we could arrive at some more certain conclusion as to causal connection. Inasmuch as this cannot be done, all the use that can be made of that method would be in connection with the method of agreement. By examining a large number of instances, if we found that a variation in the quality of the soil was followed by a variation in the quality of the crop we might infer a causal connection, but not a certain one, since we should not be protected against the interferences of other causes. In cases of intermixture of effects, where the causes can be varied by experiment though not entirely eliminated, the method of concomitant variations may be employed successfully. For instance, to use an example somewhat like one suggested in the earlier part of this section, if we had the movement of one ball in motion increased by the impact of two others, and could retard or accelerate the motion of either of the latter (or both), and observed a corresponding effect in the motion of the former, we might estimate the causal connection between the increased movement and each of the impinging forces. But unless experiment can be resorted to the method of concomitant variations, like the other methods, fails to resolve the problem of cause and effect.

§ 19. The need of some further process to determine the uniformities of nature is thus evidenced from the fact in nature of great complexity of causes and intermixture of effects. We can find help in two directions. We can take our prior knowledge of what effects follow each of the antecedents we can discover as antecedents of the effect *a*, and observe how far we can identify the effect *a* with effects we have before discovered to follow each of those antecedents. We can also inquire whether a given antecedent may not have happened to precede the given effect fortuitously, that is, through agencies of causation which are superior to and only remotely connected with the phenomenon in question, as the cause E in the example in the last section. The first of these two methods of procedure is that of deduction, the second is the elimination of chance. As the former introduces us to a larger and more important branch of argumentation, we will dispose of the second method named before dealing with the other.

§ 20. *Canon of the Elimination of Chance. If the coincidence is equal to that which would follow from the positive frequency of the respective phenomena, supposing them to be influenced by each other, the coincidence is casual; if greater, causal.*

If it be observed that the racket of carts in the street in the morning is an antecedent of my getting up from bed, and it be desired to know whether this antecedent is a cause, it is necessary to inquire how regularly the getting up would have occurred if there had been no racket. It being discovered that I should have arisen had there been no noise, nothing but sickness ever preventing me from arising, it would appear that the coincidence between the two phenomena is no greater than if each were independent of the other. Hence a mere casual co-existence is inferred, and the street racket may be eliminated from the antecedents of the phenomenon we are studying. In this case the coincidence could not be greater than if there were no connection as cause and effect. But if we had a question as to the occurrence of rain with an east wind we could illustrate this. We observe a certain number of instances where the two phenomena occur in close sequence; we also observe, say, that the east wind blows twice as often as the west: if, then, it rains only twice as often with an east as with a west wind, we should infer a casual connection: if, however, it rains more than twice as often, we infer cause and effect. If, now, it should rain less than twice as often we should infer a repugnance between an easterly wind and rain.

In some cases there is an intermixture of casual with causal connection. A player at backgammon is indebted for success both to the luck of the dice and to his own skill in moving the men. The chance element can in such cases be eliminated by a prolonged series of experiments. Skill tells in the end.

By observation of the occurrence of chance coincidences, we may construct rules of probabilities which will aid us in approaching to certainties and in eliminating the item of chance. The wider the observation the more valuable are the rules for application and the more certain the results. As to the general subject of casual coincidence it may be remarked that there is still room for a much more elaborate and complete development than has yet appeared in the works of philosophers; subsequent study will undoubtedly develop it.

DEDUCTIVE ARGUMENTS.

§ 21. A deductive argument is an argument which extends an induction to new cases through a resemblance or identity. If we have from general experience through induction determined that, so far as that experience has gone, birds have gizzards, on having before me the appearance of a creature resembling a bird in external appearance, I argue that this creature has a gizzard, this is a deductive argument. It may be expressed in this form:—

A number of creatures called birds have been found to have gizzards.
This creature has general characteristics identifying it with birds.
Therefore it has a gizzard.

This method of argument is also indicated in the following general axiom:—

Canon of Deductive Reasoning. Attributes or Things co-existing with the same attributes or things co-exist with one *another. One thing co-existing with a second thing, with which second thing a third thing does not co-exist, is not co-existent with that third thing.*

By this method of procedure an induction can be extended to new cases, uniformities of nature can be discovered, and thus laws of causation can be traced beyond the degree permitted by the experimental methods. We can follow out lines of causal connection, pursuing each thread into the snare of intermixed causes and effects, drawing it out and comparing it with its fellow. For instance, if we have one complex effect *a*, with several antecedents, A, B, C, D, we can take first our knowledge previously attained in any way of what effects follow A, as *a′*; we can then compare *a* with *a′*, and see in what they resemble. If they coincide fully, then we argue that A is the cause of *a*; if *a* coincides with ¼*a′*, then it is argued that A is the cause of ¼*a*. Pursuing the same process with B, C, and D, we can, by similar identifications, separate *a* into the parts which are respectively effects of the individual causes concerned in the joint effect, thus unravelling the tangle which cannot be penetrated by the experimental methods. Some of the most striking and valuable laws of nature have been reached through deduction, which we could scarcely suppose to have been reached in any other manner. The laws of the planetary bodies furnish ready illustration. In astronomy much more and much greater triumphs have been achieved by deduction than by induction.

§ 22. It is important to remark again the close interdependence of induction and deduction. In order to proceed deductively, we must have as a starting-point either some induction or some other deduction; in last resort, some induction. On the other hand, in order to complete an induction we have need of deduction. The two are not in any sense opposed to each other. They both have a common origin. So long as the mind occupies itself gathering up particulars into a general notion, it is moving inductively; when with a general notion already formed it advances to particular conclusions, it is proceeding deductively. So closely are the two involved that it may be said, without doing violence to the truth, that every step of an induction requires deduction, and every step of a deduction demands induction. For, from the concurrence of two similarities to form a general notion, every extension and amplification of that notion is deductive, while it is as truly the case that every moment in deduction rests upon the basis, *Whatever has been will be*; for the very starting-point in the formation of a general notion is the representation of contiguous experiences.

§ 23. From the complexity of the reasoning products, the multiplicity of the factors, and the many and intricate operations required in the process, there are apt to be errors and failures. In the deductive movement mistakes of identification are liable to occur. I may suppose, from the resemblance between A and B, that they are in complete agreement, whereas the agreement may be only seeming. I might encounter a low form of animal life, and, esteeming the object a vegetal, make predications in regard to it which are wholly incorrect. A counterfeit half-dollar may be placed in my hand, which I regard a good piece, and whose composition I declare according to my knowledge of the elements of good half-dollars. Again, in deductive reasoning, we are apt to fall into error by being too hasty, and by our not representing to ourselves adequately the respective ideas which we compare. In a multitude of associations, where there are present various similarities, the mind will sometimes be switched off its proper track, and reach conclusions based upon a less degree of agreement than is supposed. The process is rapid, the attracting forces numerous; lapses, hence, are not infrequent. This liability to error is enhanced, of course, by the ambiguities and confusions of language with which we reason. At the very start we may be wrong; for, proceeding from the proposition, *An indefinite number of fish that I have seen and heard of have eyes*, in identifying an animal whose description I have before me as a fish, I may conclude that it has eyes, whereas the fish may be from the Mammoth Cave, and be destitute of eyes. I might have known the fact beforehand that some fish are without eyes, but in the rapid progress of reasoning may have passed to the conclusion from the premisses given without remembering the instances which are at variance with my general experience. There are two methods of correcting and verifying results, which, unless so verified, are apt to be affected by these vices. Errors from over-hasty deduction, which omits to take account of facts equally true with those from which the argument starts, and opposite or contrary to them, but which are overlooked, may often be avoided by extending formally the proposition which expresses the induction beyond the instances observed to include all instances like them, even the very instance which forms the conclusion of the argument. In other words, to carry out the induction to its utmost limit, assume its truth for the unknown as well as the known instances, and make it a universal proposition. In this way the mind will react upon itself, and more readily recall instances which are at variance with the general premiss. If I extend the induction above made in regard to fish, so as to make it universal, and thus definite in my mind, as, *All fish have eyes*, the correcting influence of experience will have a better opportunity of making itself felt in bringing up instances which are opposed to such an induction. I should then be much more likely to think of the Mammoth Cave fishes than if I merely reasoned from the indefinite notion that a large number of fish have eyes. But even supposing that I made this larger generalisation, and I had never heard of the Mammoth Cave fishes, or any like them in wanting eyes, this method of correction would be of no avail. I should conclude that the fish whose description I am reading or studying has eyes. It might, however, still be the case that it was a fish of the eyeless kind. The only way in which I could certainly determine, ascertain, and correct the error, would be to see the fish itself and make direct examination. We have thus another method of verification, and one without which no deduction can be perfectly complete. The first of these two methods is that of Verification by Syllogism; the second, Verification by Observation and Experiment.

VERIFICATION BY SYLLOGISM.

§ 24. A syllogism is a formally expressed reasoning in which a universal affirmation is made of a class, and a definite particular is included in that class. Its general process is according to an axiom which forms the expressed law of the syllogism.

Canon of the Syllogism. Whatever is true of a whole class (class indefinite, fixed by connotation) is true of whatever thing can be affirmed to come under or belong to the class (as ascertained by connotation).

Thus:

All birds have gizzards, or all A is B;
This is a bird, or C is A;
This has a gizzard, or C is B;

expresses the form of the syllogistic verification.

§ 25. The following are the principal special laws or canons of the syllogism:—

1. *Every syllogism has three and only three terms.*

These terms are called the major term (B), the minor term (C), and the middle term (A). The major term is the predicate of the conclusion, and is so called because in a universal affirmative proposition the predicate is wider, and includes more than the subject, which is hence termed minor. The middle term is the medium of comparison, and never occurs in the conclusion.

2. *Every syllogism contains three and only three propositions.*

These propositions are called the major premiss, in which the major and middle terms are compared (*All A is B*); the minor premiss, in which the minor and middle terms are compared (*C is A*); and the conclusion, which contains major and minor term only (*C is B*). The major premiss usually stands before the minor.

3. *The middle term is taken universally* (*distributed*) *once at least, and must be constant in meaning.* For if we declare that *Birds have gizzards* (A is B), meaning that *some* birds have gizzards, and again in the minor that *This is a bird* (C is A), we are not entitled to infer that *This has a gizzard* (C is B), because this may be, for all that is stated, outside of that part of birds which are declared to have gizzards. But we might say, *Some A is B* and *C is all A*, and thence infer that *Some C is some B*, for if C = All A and Some A is B, *some* portion of C must be included in some portion of B. The remaining part of the rule is a requisition of consistency whose justice is obvious, for the conclusion would be vitiated unless the middle term remained constant: that is, we have not a legitimate argument if we take a term in one sense in one part of the argument and in another sense in another part. Thus, *No designing person ought to be trusted; engravers are by profession designers; therefore they ought not to be trusted*, is not a valid syllogism unless the word *designers* and its equivalents mean constantly either schemers or artistic designers; if it means either one constantly, the syllogism is valid, though it may not be true either in premisses or conclusion.

4. *No term must be distributed in the conclusion which was not distributed in one of the premisses.* Because All A is B and C is A, we can infer that Some C is B, but not that All C is B. So also, because Some A is B, and C is all A, we can infer that Some C is some B, but not that Some C is all B. We cannot argue that because All men are mortal, and some extended things

are men, that All extended things are mortal. Such an irrelevant argument is termed an illicit process. Here it is of the minor term; sometimes it is of the major.

5. *From negative premisses nothing can be inferred.* Because No A is B and No C is A, nothing follows. If it be true that no men are ten feet high, and that no monkeys are men, we cannot infer anything about the height of monkeys.

6. *If one premiss be negative, the conclusion must be negative.* If one premiss be negative, all that we assert in predication concerning one of its terms is its disagreement with the middle term. We cannot, therefore, conclude through the intervention of the middle term anything whatever about its total or partial agreement with the other term.

To these rules there are added the following subordinate canons:—

7. *There is no inference from particular premisses.*

If it be true that Some A is B and Some C is A, we cannot infer that any of C is B, for the part of C which corresponds with part of A may correspond with that part of A concerning which no affirmation of agreement with B is made.

8. *If one premiss is particular, the conclusion must be particular.* For an attempt to draw a universal conclusion when one premiss is particular results always either in a non-distribution of the middle term or an illicit extension either of the major or the minor term.

§ 26. Syllogisms receive various forms and characters from the propositions which compose their premisses. As propositions may be affirmative or negative, universal or particular, distributed, semi-distributed, or undistributed, so syllogisms may be constructed according to these divisions. Making use of the letters ordinarily used to designate these various propositions, we can represent every syllogism by a set of three letters, as AAA, AEA, EEA, &c. Taking the eight letters used, U, A, I, Y, E, η, ω, O, there will be as many possible varieties of the syllogism as there are combinations of these letters. Each one of these combinations is termed a mood of the syllogism. Not all of these moods, however, are valid syllogisms, and not all which are valid are of practical use. Of those which are both valid and useful, nineteen moods are commonly reckoned. In the consideration of syllogisms regard is also had to the disposition of the terms with reference especially to the middle terms. According to this disposition, syllogisms are arranged in Figures, the First Figure containing those syllogisms in which the middle term stands first, as subject of the major premiss; the Second Figure those in which the middle term stands second, as predicate in both premisses; the Third Figure in which it stands first, as subject of both premisses; the Fourth Figure in which it stands as subject of the minor and predicate of the major. Arranging the valid moods of the syllogism (which are also useful) in Figures, we have the common table of the Logicians. (See Mill's 'Logic,' Bk. II. Ch. II.)

§ 27. In addition to the regular and fully expressed forms of the syllogism, there are abbreviated, compounded, and irregular forms. The Enthymeme is a form of syllogism in which one proposition is suppressed. *Comets must be subject to the law of gravitation; for this is true of all bodies which move in elliptic orbits*, is an enthymeme which in full form is—

All bodies moving in elliptic orbits are subject to the law of gravitation;
Comets move in elliptic orbits;
Therefore comets are subject to the law of gravitation.

In the books on logic examples of enthymemes are given where the major premiss is unexpressed, and where the conclusion is suppressed. Where, however, the major premiss is left out, there is no reason for calling the argument an abbreviated syllogism. It is improper so to call it; for an implication is carried thereby that the syllogism is the normal mode of reasoning, which is contrary to the truth. A syllogism which proves or furnishes a reason for one of the premisses of another syllogism is called a Prosyllogism; and a syllogism which contains, as a premiss, the conclusion of another syllogism is called an Episyllogism:

All B's are A's.
All C's are B's.
Hence all C's are A's.
But all D's are C's.
Hence all D's are A's.

The first of these two syllogisms is a prosyllogism with respect to the second; and the second an episyllogism with respect to the first.

The name Epicheirema is given to a syllogism when either premiss is proved or supported by a reason implying the existence of an imperfectly expressed prosyllogism:

All B's are A's, for they are P's.
All C's are B's, for they are Q's.
All C's are A's.

The Sorites is a chain of syllogisms:

All A's are B's.
All B's are C's.
All C's are D's.
All D's are E's.
Hence all A's are E's.

This chain can be decomposed into three syllogisms:

B's are C's; A's are B's; hence A's are C's.
C's are D's; A's are C's; hence A's are D's.
D's are E's; A's are D's; hence A's are E's.

§ 28. In addition to the special canons of the syllogism above given, there are special laws for each figure, which express facts in regard to syllogisms of that figure, as for the second figure (1) *one premiss is negative*, and (2) *the major premiss is universal*. It is not important to enumerate them here.

§ 29. Syllogisms can be represented in the order of extension or of intension:

All Ranunculaceæ are Exogens;
The Anemone is one of the Ranunculaceæ;
The Anemone is an Exogen;

is an extensive syllogism. Of the other method is the following:—

All the qualities of Ranunculaceæ are qualities of Anemone.
All the qualities of Exogens are qualities of Ranunculaceæ.
All the qualities of Exogens are qualities of Anemone.

Syllogisms can also be exhibited in hypothetical forms corresponding to the conditional or disjunctive character of their propositions:

If A is B, C is D;
But A is B,
Hence C is D;

is a constructive conditional syllogism; called constructive because it affirms the supposition made in the major premiss; *Modus ponens.*

If A is B, C is D;
But C is not D,
Hence A is not B;

is a destructive conditional syllogism because it denies or negatives the supposition of the major premiss; *Modus tollens.* There are only these two alternatives in this form of syllogism, either the antecedent of the major premiss must be affirmed or the consequent denied in the minor.

Disjunctive syllogisms consist of a disjunctive major premiss with a categorical proposition, either affirmative or negative, forming the minor premiss. Of these there are two forms or moods: *Modus ponendo tollens*, which is not necessarily or always true; and *Modus tollendo ponens*, which is always expressive of truth in its conclusion. Of the first the following is an example:

A is either B or C,
But A is B;
Therefore A is not C.

It may happen if A is either B or C, that it may be both B and C, in which case the conclusion does not follow. If B and C are mutually exclusive the concluding inference will be correct. The other form is the following:

A is either B or C,
But A is not B;
Therefore A is C.

A dilemma is a syllogism having a conditional major premiss with more than one antecedent, and a disjunctive minor. The first form is the simple Constructive Dilemma:

If A is B, C is D; and if E is F, C is D;
But either A is B, or E is F;
Therefore C is D.

A second form is the complex Constructive Dilemma:

If A is B, C is D; and if E is F, G is H;
But either A is B or E is F;
Therefore either C is D or G is H.

A third form is the Destructive Dilemma:

If A is B, C is D; and if E is F, G is H;
But either C is not D, or G is not H;
Therefore either A is not B, or E is not F.

§ 30. All reasoning may be exhibited in the syllogistic form, probable and contingent as well as assertory and demonstrative. The standard forms of the syllogism which are of the most use are those of the first figure. Syllogisms of the second, third, and fourth figures are equivalents of moods of the first figure, and are capable of reduction to the primitive and standard forms of the first figure.

§ 31. For the purpose of applying the syllogistic method of verification, it is necessary to frame a syllogism out of the materials which make up the argument under consideration and to test that syllogism by the canons of syllogistic reasoning.

I. Ascertain what is the conclusion or the point to be proved. State this distinctly in a proposition, so as to distinguish the Subject (minor term of the syllogism) and the Predicate (major term).

II. Find out the middle term of the argument. In a valid syllogism there must be a middle term and only one; and it must be something not occurring in the conclusion.

III. Find out some proposition connecting the middle term with the major term; this is the major premiss of the syllogism. Also some proposition connecting the middle term with the minor term, giving the minor premiss of the syllogism.

IV. The two premisses and the conclusion being stated in form and order, the validity may be judged according to the laws of the syllogism in any one of the following ways:—

(1) If the deduction coincides with any of the valid modes, it is valid; otherwise not.

(2) It being seen what figure the argument comes under, it may be tested by the special canons of that figure.

(3) The general canons of the syllogism may be applied to discover errors if there be any.

§ 32. To refer again, in concluding this topic, to the uses of the syllogistic process, its advantages may be thus recapitulated:

First. It impresses upon the mind the fact that an advance made in inference to a new case is also valid for an indefinite number of cases. By making use of a general theorem we realise more fully the full extent of what is proved if anything is proved.

Second. By assuming a universal proposition we are more likely to remember or find contradictory instances, by which the reasoning may be shown to be unsound, if it be so. This advantage is associated with the foregoing.

Third. Errors arising from haste in inferring, from the great complexity of material, and from the presence of attracting but misleading associations, are more easily detected and avoided. The process is reduced to definite and properly guarded steps.[1]

VERIFICATION BY OBSERVATION AND EXPERIMENT.

§ 33. After having proceeded inductively and deductively, and attained a given conclusion, we cannot arrive at the highest degree of certainty, notwithstanding the care which may have been taken, unless we verify our conclusions by direct observation and experiment. The syllogistic verification is a guard against an improper manner of reasoning, but is not an absolute guaranty of coincidence of the conclusion with the facts of nature. In addition, we must see that the conclusion accords with the results of observation, wherever it can be had. If it does so accord, the argument is carried to its highest degree of completeness. So also if, though the conclusion does not in all cases agree with those results, the failure can be explained by the interference of frustrating causes, the argument will still hold. But the cases observed, and in which there is accordance, must, some of them at least, be of equal complexity with any other cases in which its application could properly be called for. And any uniformity of nature expressed in law is held to be more certain and undisputable after it has been found to explain some complex case which had not previously been connected with it. Any law which alone of all others can explain some crucial case is thus esteemed to have its highest confirmation. In cases where no extended generalisation is made, the verification by observation and experiment is simple and direct; where the proof is of a more general fact, and the proposition more extensive in its application, the verification requires a wider and more careful investigation. In some cases it cannot be had at all; the argument then will want this conclusive final step. We are thus brought around to our starting-point. We set out with observation and experiment as the primary methods of attaining a knowledge of the uniformities of nature, and we rest with these means as the ultimate and final stage of the process.

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[1] See Mill, Bain, Jevons, Whately, Thomson, and other writers on Logic.

ADDITIONAL CLASSES OF ARGUMENTS.

§ 34. Having thus investigated in some detail the chief methods of reasoning, it still remains to make some further classifications of arguments. From what has gone before it appears that the one general method of proof is to find uncontradicted uniformities of nature. The universal test of all arguments is undisputed agreement throughout nature. This test is not the method of agreement before set forth, but an agreement broader and more universal, to establish which the inductive method of agreement is only a single mode of procedure. But every method of argument is only a method whose ultimate purpose is to prove agreement or disagreement, either in establishing a general conclusion or in identifying particulars. What has never been contradicted in any known instance (there being ample means and opportunities of search) is true. Having this as the great test of the validity of arguments, we can go forward and classify arguments, and measure them according to their degree of completeness.

§ 35. According to their manner of procedure, all arguments may, as before shown, be regarded as Inductive or Deductive, an inductive argument being one which concludes with a more general proposition than is embraced in the premisses; a deductive argument, one which concludes with a proposition equally or less general than is embraced in the premisses. When, from the observation of a number of individual instances, we ascend to a general proposition, or when, by combining a number of general propositions, we conclude from them a proposition still more general, the process is induction. When, from a general proposition, by combining it with other propositions, inference is made which concludes with an equally general or a less general proposition, the process is Deduction. Every induction, however (it cannot be too often repeated), involves deduction, and every deduction involves induction.

§ 36. According to their degree of cogency and completeness, arguments may be divided into Perfect, Imperfect, and Fallacious. A perfect argument is one whose conclusion rests upon premisses which express an ascertained complete uniformity of nature. An imperfect argument is one whose conclusion rests upon premisses which express an incomplete or empirical uniformity; a fallacious argument is one which is essentially vicious and untrue, which no amount of verification can make true.

§ 37. Perfect arguments are the least numerous. They include those conclusions which are legitimately drawn from such propositions as *Things equal to the same thing are equal*, and *The sums of equals are equal*; also from the law of gravitation; also such statements as, that all men, after having lived a certain average age, have died; that force persists; that nourishment is necessary to life; that night is followed by day; that removal of air causes death; that men have need of sleep; that the blood in animals circulates; that food is digested and assimilated; that the attraction of the moon is a cause of tides. If the argument is inductive, the conclusion must express a complete general uniformity. All of the above propositions are the conclusions of perfect inductive arguments. If the argument is deductive, the major premiss must express a perfect induction, and the identity of the particular examined with the generalised particulars must be complete and perfect. The propositions above given will furnish major premisses for perfect deductive arguments. Perfect arguments are found most abundant in the exact sciences, and in practical calculations from invariable sequences of experience.

§ 38. The vast majority of arguments used in ordinary reasoning are imperfect arguments; several subdivisions of them (not naturally exclusive) may be noticed in order. The first sub-class which commands attention is that of Arguments from Empirical Laws. An empirical law is a uniformity of nature supposed to be resolvable into some more general uniformities, but which is not yet resolved. When what was an empirical law has been resolved into more general uniformities, or into ultimate laws, it is termed a derivative law. That a red sky at night is a sign of fair weather, that horned animals are ruminants, that auroral phenomena and magnetic storms have a connection with spots upon the sun, that aconite allays fever, that quinine cures ague, that early rising leads to wealth, that the use of tobacco leads to that of alcohol, that the wealthiest are the most respected, that honesty is the best policy—are examples of empirical laws. The rise of water in pumps, the increase of the temperature of the earth at a given rate, that air-breathing animals are hot-blooded, that male fern destroys tape worms, that snow occurs on high mountains—are derivative laws. Empirical laws cannot form a perfect argument.

They may be practically valid within a narrow range, but they have no scientific certainty. We may infer from a number of instances observed that aconite cures fever, but unless we can tell why it cures fever, that is, unless we can resolve the uniformity into higher uniformities, we cannot be certain that it will cure fever; nor can we deduce the conclusion that it will cure a particular disease which is identified with fever. Most of the ordinary reasonings from what is popularly termed *experience* are reasonings to and from empirical laws. The maxims of common life, of business, of society, of politics, of medicine, too often of jurisprudence, are only empirical laws. Some derivative laws may furnish perfect arguments. Where a uniformity is resolved into a higher, and that into a still higher, and so on till the chain of connection with an ultimate law of nature is perfect, the derivative uniformity may be considered, when expressed, a perfect argument. Thus, that night is followed by day, that men have need of sleep, that the attraction of the moon causes tides, that air-breathing animals are hot-blooded, are derivative laws whose connection with ultimate laws is made out, and which may be accepted as perfect uniformities. Where, however, a derivative law is only explained by another which itself stands in need of explanation, it cannot furnish grounds for complete inference much beyond a mere empirical law. If it should be observed as a uniformity that men carry umbrellas when the sky is overcast, and this should be resolved into the higher uniformities, that a cloudy sky portends rain and that getting wet is deleterious or unpleasant, unless we could establish the latter generalisation upon the grounds of a complete induction, the first resolution would not be of much value for the purposes of a perfect argument. We could neither argue that men should carry an umbrella or are likely to carry umbrellas when the sky is overcast, nor that because a man carries an umbrella when the sky is overcast that there is a likelihood of rain. If we observe that poppies are soporific, and resolve it into the higher law that opium is soporific, we have not made much progress, unless we can explain also the action of opium to cause sleep. The uniformity is not extended far enough to give us much more of a vantage ground. We may presently find that opium is not universally soporific.

There are certain uniformities of nature that have a resemblance to empirical laws, but whose extent is so wide and so general that they have a certainty which is indisputable. These uniformities must be removed from the category of imperfect arguments to that of perfect; an example may be found in the law of universal causation. Says Mr. Mill, 'If we suppose the subject-matter of any generalisation to be so widely diffused that there is no time, no place, and no combination of circumstances, but must afford an example either of its truth or its falsity, and if it never be found otherwise than true, its truth cannot depend on any collocations unless such as exist at all times and places, nor can it be frustrated by any counteracting agencies unless by such as never actually occur. It is therefore an empirical law co-extensive with all human experience; at which point the distinction between empirical laws and laws of nature vanishes, and the proposition takes its place among the most firmly established as well as largest truths accessible to science.' All those ultimate laws whose character and validity cannot be impeached without contradiction, and which are not themselves involved in or deduced from still more ultimate laws, must hence be separated from empirical laws, for they are laws which we do not suppose capable of being resolved into higher laws, and must not be considered as partaking of the uncertainty of empirical laws. Upon them rests the security for all proof whatsoever.

§ 39. A second division of imperfect arguments is Probable Arguments. These are arguments whose conclusion is only approximately true. If we draw the inductive general conclusion, *Most men are cruel*, we have a probability expressed, and no deductive argument that is not a probability can be drawn from it. So, if we declare from various expressed intentions of his and from the average certainty of such intentions being carried out that A. B. will visit America, the argument is a probable one. So any conclusion that a man under a certain set of circumstances will act in a given way is a probable conclusion. Where there is a great complexity of causes and a complex intermixture of effects, most conclusions that can be drawn are at best only probable conclusions. Reasonings from empirical laws give no probabilities except within a narrow range, and even there the results are probable only in a broad sense of the term, for we do not know what unknown causes may interfere with those results. Empirical laws themselves are often but approximations to the truth.

It should carefully be observed that not all probable arguments are imperfect. It is only where the probability is not quantitatively determined that the argument is imperfect. Where the exact proportion of cases in which a given event will occur is ascertained, the probability becomes itself a uniformity and is a law of nature. If this law is subsumed under higher laws, and so on to an ultimate law, a perfect uniformity has been found. It is quite practicable to reduce probabilities to a science. If we can find the exact proportion of cases in an approximate estimate, we can state the probability numerically and make the measurement of probabilities amenable to numbers and combinations of numbers. We can render an approximate generalisation certain if we can enumerate all the exceptions, as in rules of grammar. We can also reduce the uncertainty by ascertaining exactly the occasions and circumstances wherein the approximate law holds. When these are all ascertained the law passes from an empirical to a scientific law.

§ 40. A variety of probable arguments may be selected to form the third division of imperfect proofs, namely, Arguments from Analogy. Analogy is resemblance; and an argument from analogy differs from complete induction in the conclusion that two things from resembling in a number of points may resemble in some other point, which latter is not known to be connected with the agreeing points by a law of causation or co-existence. Analogical arguments, then, exhibit a less complete agreement than the inductive arguments, which are validated by the usual experimental processes. An inference that there are inhabitants of Mars or Venus because there are inhabitants of the earth is analogical. We may argue in the same manner that a certain poem was written by Tennyson because its style resembles that of known works of this author. Applying an argument to state government which is drawn from family administration is another illustration. Because certain articles are seen to digest at a certain rate and in a certain manner in the stomach of a dog which has been partly laid open to view, analogical inferences can be drawn as to the time and manner of digestion in a man. All the arguments which have a metaphorical application and those which appear in similes are of this class. The measure of probability of analogical arguments is the extent of the points of agreement (and their importance) as compared with the points of difference. As the latter are few and unimportant as compared with the former, so the probability is increased; conversely, it is diminished.

§ 41. As a fourth class of imperfect arguments may be instanced those in which the essential parts are hypotheses. The definition of an hypothesis has been given in a preceding chapter (Chap. LII. § 13), and need not be repeated. Considered either as conclusions of inductive or as premisses of deductive, hypotheses can never attain to the rank of perfect arguments. Their certainty depends, like that of all other arguments, upon their harmony with nature. This agreement rests either upon ascertained uniformities, which furnish primarily a ground for induction, or upon verifications of deductions, which are made from the hypotheses. In the former case the hypothesis is a law whose generality is not far extended or well established. In this sense an empirical law might perhaps be regarded as an hypothesis. But generally, even when so used, hypotheses lack the certainty or importance even of empirical laws, for, so far as they go, the latter have a certainty to which the former can lay no claim. Hypotheses may not be observed uniformities at all, but only assumed uniformities. That night is followed by day is an established, though so far empirical, uniformity; it cannot be called an hypothesis. That the earth revolves on its axis once in twenty-four hours was once an hypothesis. It was not a known uniformity, but a supposition of a uniformity to explain facts, and to make out conclusions which would be subjects for verification. In this, the proper, use of the term hypothesis, it is observable that the value of such supposition is ascertained by the verification. The hypothesis is assumed, deductions are made, and verification takes place. If the conclusions are verified, the hypothesis ceases to be an hypothesis and becomes a proved law. The chief office, then, of these fictions is to furnish premisses for deduction. So far as they are assumed upon no evidence they are of use only in deduction, and have no relation to induction; so far as they are assumed upon insufficient evidence they may be considered as inductions, imperfect and unscientific. If the verification can be so complete as to establish the hypothesis as a law, the hypothetical argument approaches a perfect argument; and when, as is sometimes the case, the hypothesis is not verified at all and gives no opportunity for or hope of verification, the argument is of the lowest value. The hypothesis of a luminiferous ether to explain light is of this last character, as was also the vortex hypothesis of Descartes. The value of hypothesis in discovery has been immense; but that value always depends upon their being of such a character that they can be verified or disproved by observation and experiment. In short, they must have some foundation in an observed similarity at the start. A mere arbitrary supposition which marks no connection through the processes of association between facts which have some real resemblances, or at least deceptive resemblances, which seem to indicate lines of congruity, is of no relevancy for the purposes of explanation, is meaningless and useless. An hypothesis is properly a link in the process of discovery and proof, the gathering together roughly of the materials which are to be sifted and arranged more scientifically afterward; it is an intermediate step, whose importance is only that it puts us on the road to the ascertainment of truth.

§ 42. Fallacious arguments or Fallacies are in reality no arguments at all; hence it might be claimed that they deserve no place in an exposition of arguments. But the fact that they pass for arguments, and are accepted as such by some, renders legitimate an illustration of them among other arguments. They might perhaps be termed apparent arguments, but the term fallacious is the most appropriate, for its effect in characterising their deceptive nature and tendency. In one view of fallacies it is a difficult matter practically to separate fallacious from imperfect arguments; there can be no exact line of demarcation drawn between them. An argument from an empirical law may still be fallacious, though resting upon an observed uniformity; and this fallaciousness may rise solely from the defect in the extent of the empirical law. This is on the supposition that the term *fallacy* is equivalent to error; any conclusion which for any cause is erroneous is fallacious. If, however, arguments which proceed inductively and are insufficient be regarded as imperfect arguments, and arguments which proceed deductively and are insufficient from erroneous identifications are regarded as proper fallacies, a genuine and useful distinction is made. In this view fallacious arguments are those which no amount of observation and experiment ever could verify; they are inherently vicious and untrue. Of fallacies of this character there are two general classes—Logical fallacies and Material fallacies.

§ 43. Logical fallacies are those which occur in the mere form of the statement (*in dictione*), and which can be discovered without a knowledge of the subject-matter of the argument. They include Purely-logical and Semi-logical fallacies. The latter are (1) Fallacies of Equivocation; (2) Fallacies of Amphibiology; (3) Fallacies of Composition; (4) Fallacies of Division; (5) Fallacies of Accent; (6) Fallacies of Figure of Speech. These have been illustrated in the preliminary survey of language with which this work commenced (Chap. IV. § 60.) Fallacies purely logical may be divided into four sub-classes:

1. *Fallacy of Four Terms.* This occurs in the syllogism where an attempt is made to use four terms, which can only result in two syllogisms or in a false conclusion.

2. *Fallacy of Undistributed Middle.* As,—All Frenchmen are Europeans; all Parisians are Europeans; therefore all Parisians are Frenchmen. The conclusion here is true, but the argument fallacious.

3. *Fallacy of Illicit Process.* As,—Because many nations are capable of self-government, and nations capable of self-government should not receive laws from a despotic government, therefore no nation should receive laws from a despotic government.

4. *Fallacy of Negative Premisses.* As,—Colonists are not Europeans, and Americans are not Europeans; therefore Colonists are Americans.

5. *Fallacies of the Breach of Rule* 6 *of the Syllogism.* As,—All Austrians are Europeans; no Australians are Europeans; therefore all Australians are Austrians.

All of the above are violations of the rules of the syllogism, and have been referred to before. The fallacies exhibited in breaches of the other rules of the syllogism are included under the fallacies first named.

§ 44. The following are Material fallacies, or those arising outside of the verbal statement (*extra dictionem*), and concerned in subject-matter of the argument:—

1. *Fallacy of Accident and its Converse.* This fallacy consists on the one side in arguing erroneously from a general rule to a special case; on the other side, in arguing unwarrantably from a special case to a general one; or, thirdly from a special case to a special case. Of the first case may be cited: Men are forbidden to kill; using capital punishment is killing; therefore men are forbidden to use capital punishment. What you bought yesterday you eat to-day; you bought raw meat yesterday; therefore you eat raw meat to-day. He who thrusts a knife into a person should be punished; a surgeon, in operating, does so; therefore he should be punished. Of the second case may be cited: To give to beggars promotes mendicancy, and the practice should be discouraged; therefore no assistance should be given to anyone who solicits it. This man is white as to his teeth; therefore he is

white. (*Fallacia a dicto secundum quid ad dictum simpliciter.*) These fallacies arise from changing the premisses in the course of the argument. A proposition is usually taken with some qualification which is omitted or disregarded in the conclusion, or when a qualification, which is necessary and implied in order to make a proposition true, is disregarded in the argument, this fallacy occurs. It is a common fallacy attending the arguments of loose and careless thinkers. Those errors which arise from taking a proposition as true 'in the abstract,' that is, without limitation, have their place under this head.

2. *Fallacy of Irrelevant Conclusion* (*Ignoratio elenchi*). This is a fallacy which introduces a conclusion which the premisses do not prove. This man is accused of crime; but his accuser is a bad man; therefore the accused is innocent. The distrust which is given to anything said by a young man in argument, and a conclusion of the falsity of his arguments because of his youth; the influence of any matter introduced by way of ridicule, and which is extraneous to the subject, afford illustrations of this error. The great mass of mankind act upon this fallacious method of argument. The character of the man who presents and advocates a case or a measure usually determines persons to consider his arguments good or bad. Many people never can be convinced by one whom they dislike. The best and most complete arguments which have ever been advanced have been disposed of, even by intelligent men, upon the consideration that the author was not a man of much profundity or reputation. It is often gravely argued in opposition to considerations for the benefit of some religious body, against which there is a prejudice, that we ought not to displease God, the real question being whether supporting such a sect would be displeasing God, and the statement enunciated in regard to displeasing or pleasing Him not being the matter in question at all. Persons who have weak cases almost invariably introduce into their arguments a series of irrelevant conclusions; the arts of orators are often largely exercised in surreptitiously introducing and skilfully covering results of argument which are of no relevancy whatever.

3. *Fallacy of Petitio Principii* (Begging the Question). This is the common fallacy of assuming the very point sought to be proven. Every complete syllogism is a *petitio principii*, the conclusion being included in and asserted by the major premiss. Arguing in a circle illustrates the same difficulty. Those who

attempt to prove the being of God from the Scriptures are in this situation, for the truth of the Scriptures depends upon the prior assumption of God's existence. If we were to argue that we are bound to obey laws by a social compact entered into by our ancestors, we assume that it took place before society was called into existence, whereas there is no such thing as social obligation till society has first been formed. This fallacy, like the preceding, is of great extent. It pervades reasonings upon nearly every subject, and has entered, not only into every science, but into the foundations of all science. It has prevailed in formal reasoning and in informal. Appellations and epithets have conveyed the fallacy as well as extended statements. It is exposed by complete definition, and its evils are thereby more readily corrected than by any other method. If the premisses are clearly and specifically set out in their full import, we are not apt to be misled by this unwarranted assumption.

4. *Fallacy of the Consequent* (*Non sequitur*).—This class includes arguments so inconsequential that they have no cogency. An assertion of a conclusion which does not have any connection with the premisses is of this character. The following is an example: Episcopacy is of Scripture origin; the Church of England is the only episcopal church in England; therefore the Established Church is the church which should be supported.

5. *Fallacy of Many Questions.*—This division embraces those fallacies which arise when two or three questions are so combined that no true answer can be given to them without analysis. Was Washington the first President of the United States and a man of ill repute? can be answered correctly only by separating the questions. Have you left off practising law? addressed to a man who never had been a lawyer, would be answered fallaciously if replied to by Yes or No. This fallacy scarcely deserves a separate place in the treatment of fallacious arguments, for when embodied in an argument it is really included under some of the other fallacies here referred to and classified.

§ 45. A further division of arguments is sometimes made into Direct (or Ostensive) and Indirect. A direct argument is one in which the proof is directed to the conclusion desired; an indirect, where the proof of the conclusion is reached indirectly—where, for instance, the argument aims to show the truth or falsity of the contradictory of the conclusion really in dispute. If that contradictory is true the conclusion is disproved, and conversely. The type of indirect arguments is the *Reductio ad absurdum*, by which everything contradictory to a given proposition is shown to be absurd. This is a common method of proof in geometry and is both legitimate and valuable.

§ 46. It should again be remarked that here, as elsewhere, the divisions made are not separable by sharply drawn demarcations. The constant interference of induction and deduction has been noticed. And as between perfect and imperfect arguments, there is a shading of one class into the other. Arguments are relatively perfect and imperfect. There is no absolutely perfect proof, though some may be esteemed perfect, so far as all practical purposes are concerned. From these conclusions which have the highest certainty to the merest empirical uniformities there is every variety of completeness.

§ 47. To sum up: Arguments are products of inference, being processes of reasoning expressed and preserved in words. They may all be reduced to two forms, which furnish a groundwork for a division into Inductive and Deductive Arguments, which are always found interwoven with each other, though the prevailing character of the argument is either one or the other, the former term characterising an argument which rests in a general conclusion, the latter an argument which rests in the identification of a particular with a general. Arguments are also Perfect, Imperfect and Fallacious. According to still another classification, they are Direct and Indirect. The validity of all arguments is determined finally by the test of universal congruity.

CHAPTER LV.

PRINCIPLES.

§ 1. WE have examined the earliest and most rudimentary of the products of Cognition and found them comprised under the names: *Percepts*, *Re-percepts*, *Concepts*, *Abstracts* and *Judgments*. We also found represented by the terms *Fictions*, *Definitions*, *Divisions* and *Arguments*, certain integrations of knowledge having a distinctive character and a very considerable importance. In the exposition of the last named class we observed that certain propositions acquired an individuality consisting in the fact that they stand as foundations for arguments, being either the premisses from which a chain of reasoning proceeds or conclusions upon which the mind rests, and which are recognised as a basis for other possible reasonings. In other words, there are many propositions which express uniformities of nature and whose office is to declare those uniformities—to furnish resting places and points of departure for thought. Such propositions are *Principles*:[1] they are landings on the staircase of thought. Principle and Law are substantially synonymous terms, although sometimes it is claimed that a law is the *expression* of a principle. If this be accepted, we are then called upon to suppose that a principle is some mental cognition of which the law is the expression in words: this cognition must be a judgment or a single notion. Unless such a cognition be a primitive or ultimate notion, it does not differ in character from any other notion; its distinctive character as a principle comes from its use and its use depends upon its expression. All that which makes it a principle, as distinguished from any other notion, is involved with its expression, so that the *law* is really the *principle*. It may be claimed, however, that in so far as a principle is an ultimate notion it is something different from other notions, and that it should hence be distinguished from its expression in words. Without here discussing the questions concerning the points of difference, if there be any, between ultimate and proximate notions, it is sufficient to observe that the term *principle* is not applied solely to such notions. It has reference as well to maxims of life, to empirical agreements, to high and low generalisation in science and art. To restrict it to the sphere of necessary and universal truth may be (in the view of some) to give it the meanings it *ought* to have; but no one can with propriety maintain that it *is* confined within such limits. Accordingly we shall consider *principle* and *law* to be convertible terms, preferring, however, the former as having fewer allotropic meanings than the latter, and applying both to propositions and not to single names.

§ 2. It may be remarked of principles at the outset that they are, as a matter of fact, either Individual or Common. Every person has his own set of principles, however crude or erroneous they may be. A wild man of the woods has his own data from which he reasons as much as has a civilised being, and these data have been formed by the circumstances of the savage's life. But only those principles which are common to a considerable number of individuals are worthy of systematic consideration. Science has only to deal with those truths which relate (or may relate) to minds in general, and are formulated from comparisons of the experiences of a plurality of beings.

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[1] Cf. Dugald Stewart, *Elements*, Vol. II. Chap. I. Sec. 2.

§ 3. Principles are either Empirical or Scientific. Empirical principles are Empirical laws (Chap. LIV.). They form a large portion of the generalisations which are made the ordinary bases for opinion and for action. They are not cognised as connected with other and higher principles in causation, nor are they yet resolved (though supposed to be resolvable) into higher uniformities. They express some knowledge but not reliable knowledge, except within very circumscribed limits. On the other hand, scientific principles express complete, ascertained, and defined uniformities of nature, whose truth, connections and extent are proved according to those methods which form complete arguments. Both the highest inductive generalisations and derivative laws are equally scientific principles.

§ 4. Principles may be regarded further as Theoretical or Practical. Theoretical principles are those which form the standards of science, practical those which lie at the foundations of the arts. In other language, theoretical principles are the principles of the theoretical sciences; practical principles are the principles of the practical sciences.

§ 5. There remains the most important classification of principles of all, namely, that according to their relative universality. According to this method of dividing, principles are (I) *Principia Postulanda* (*Axiomata Abstracta*, *Postulates*); (II) *Principia Majora or Generaliora* (*Axiomata Generalissima*, *Higher Generalisations*, *More General Principles*); (III) *Principia Media* (*Axiomata Media*, *Middle Principles*); (IV) *Principia Minora* (*Axiomata Minora et Infima*, *Particular Principles*). This classification is based upon that of Bacon,[1] and its import will receive illustration in the succeeding sections. It may be remarked here, however, that principles of any of the classes just enumerated may be theoretical or practical, and those of all except the first may be either empirical or scientific. Postulates are scientific, not empirical principles.

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[1] Etenim axiomata infima non multum ab experientia nuda discrepant. Suprema vero illa et generalissima (quæ habentur) notionalia sunt et abstracta et nil habent solidi. At media sunt axiomata illa vera et solida et viva, in quibus humanæ res et fortunæ sitæ sunt, et supra hæc quoque tandem ipsa illa generalissima: talia scilicet quæ non abstracta sint sed per hæc media vere limitantur.—*Nov. Organum*, Lib. I. Aph. CIV.

PRINCIPIA POSTULANDA.

§ 6. Under the term *Postulates* are embraced those truths which are ultimate, universal and necessary. They are ultimate in that they cannot be reduced to other truths or deduced from them; their universality is made manifest in the fact that, so far as is known, all men receive them; their necessity appears in the fact that no man is able to conceive them as otherwise than true without contradicting himself. These tests are the criteria of the postulates.

§ 7. A truth is a true proposition; a proposition is the expression of a judgment; and a judgment is a cognition of agreement or disagreement between two notions. All notions involve judgments and all judgments notions. In a sense, therefore, it may be said that postulates are founded upon primitive or ultimate notions. It is more correct to say that those things which are the *postulanda* of our knowledge may be expressed as notions by a single term or name, or may be expressed as postulates by predications. Neither can logically be said to be more ultimate than the other.

The following are some examples of postulates:—*Magnitudes that coincide are equal. The whole is greater than its part. Doubles of equals or of the same are equal. Two straight lines cannot enclose a space. Things equal to the same thing are equal. Whatever is, is. I exist. The same thing cannot be A and non-A. Every effect has a cause. Every event is uniformly preceded by some other event. Force persists. The Ego is different from the non-Ego. Every attribute has a substance. Every phenomenon has its noumenon.* The expression of postulates may be indefinitely varied. The above makes no claim to being a complete or a scientific mutually exclusive enumeration: but what are given are intended merely as illustrations. The list includes some of the most important and some of the most familiar postulates.

§ 8. Postulates are not intuitive, but are inferential. They are generalisations from experience. The individual cases from which they are generalised have relations which were intuitively apprehended, but the judgments which are expressed by the postulates are the accumulated results of many experiences, both of the individual and of the race. Neither are the postulates necessarily self-evident, in the simple sense of the word. Sometimes they are so and sometimes they are not; their self-evidence depends on the degree of familiarity we have with the notions which are compared and with their association. That *The whole is greater than a part* may fairly be called self-evident; that *Force persists*, or that *Every effect has a cause*, may not be self-evident. If, however, by *self-evident* is meant *incapable of logical contradiction*, all these truths are self-evident. When once the meaning of these terms is understood, they cannot be denied without self-contradiction.

PRINCIPIA MAJORA.

§ 9. The remaining classes of principles are distinguishable solely by their relative generality and particularity. The divisions are entirely relative and their boundaries not fixed, but liable to change and changing at all times. A principle which one would put in one class another would put in a lower or higher one perhaps, and what in one view or with regard to one science would be a more general principle, would be for a higher science a more particular principle. Nevertheless we can roughly define the four classes we have named, not claiming infallibility in assigning places to the various principles cited, nor asserting that the lists may not require emendation and correction. As knowledge increases and grows more definite, the relative generality of many principles will be altered.

§ 10. Among the principles not to be ranked as postulated truths, as not ultimate though universal and necessary, are the propositions of geometry, depending directly upon ultimate postulated truths and deducible from them. So, also, any directly deduced truths from the postulates should be ranked in this class—not, however, mere repetitions of the postulates in other words. The propositions of arithmetic and of algebra should find their place here rather than among postulates, excepting a few of the most fundamental, perhaps, as $1 = 1$, $1 + 1 = 2$, $2 - 1 = 1$, $1 \times 1 = 1$, etc. So far as the latter are universal formulas and ultimate truths they may be placed among the postulates. Deduced formulas, however, in general should fall into a lower rank.

§ 11. We may also enumerate here the three laws of motion, the law of universal gravitation, the more general expressions of the laws of the nature of light and heat, the law of the atomic constitution of matter, the law of chemical combination, generalised statements of what life is, of mind, the concomitance of mind and body, ground principles of the sciences of character, sociology, politics and practical sciences, which rest upon fundamental and ultimate axioms.

PRINCIPIA MEDIA.

§ 12. These principles constitute the great mass of what may be denominated working principles—the more familiar generalisations, sufficiently high to furnish proximate explanations of phenomena, but not going back far enough to weary and confuse the mind. First should be mentioned deductions from the class next above; then the immense number of propositions of physics, which create points of departure for practice, as the laws of the composition and resolution of motions and forces, of areas, of the mechanic powers of pneumatics, acoustics, electricity and optics, of crystallisation, of heat and light, of chemical elements and substances, various derivative laws of biology, laws of the classificatory sciences, of ethics, ethology, politics, &c. This division will embrace the most of the empirical laws of nature and the intermediate derivative laws. It includes by far the greatest proportion of the laws of nature. The character of these principles is sufficiently marked by the illustrations given; they are attained both inductively and deductively. Their importance for practical purposes is superior to that of any other class of principles.

PRINCIPIA MINORA.

§ 13. These principles, in the words of Bacon, '*non multum ab experientia nuda discrepant.*' Yet there are statements of general facts, above an individual or single observation, and yet not sufficiently general to occupy the rank of mediate principles of a science, which require to be placed in a class superior to *nuda experientia* and inferior to the other. Deductions from mediate principles occur here, and the lowest generalisations of which any science takes cognisance. Expressions of the distinctive characteristics of species and varieties in the classificatory sciences may be instanced; so also expression of the minor characteristics of the chemical elements.

CHAPTER LVI.

SYSTEMS.

§ 1. The last distinctive product of Cognition to which reference will here be made is the System. A system is an organised body of knowledge including notions and judgments, single terms and propositions, definitions and divisions, arguments and principles. Systems, in other words, are the larger aggregates of cognitions, inclusive of many or all of the minor aggregations indicated by the names just given. It is somewhat difficult to fix the constitutive boundaries of these products. The term *system* 'may be applied to a narrower or wider range of beings or events, and may be founded on generalisations which are narrower and wider, or on inductions which are more or less profound. They may include a single kingdom of organic or inorganic existences, or may embrace all material things. They may define and arrange these according to the more obvious properties and laws which are open to common observation, or may employ those properties which appear to hasty observation to be very remote, and which are reached only by the most sagacious conjectures and the most skilful experiments. They may include the domain of spirit only, or extend to the kingdoms of both matter and spirit, and arrange the two domains by the properties and laws which can be established as common to the two.'[1]

§ 2. A line of classification of systems may be followed which is very similar to that adopted in treating of principles. To begin with, systems may be either Empirical or Scientific. The former are the loose, unregulated, unverified, popular associations of knowledge, which have little regard to the principles of scientific classification, and which are adopted to suit temporary convenience or to harmonise with prejudices which have already taken possession of the mind. In them empirical laws, incomplete arguments, doubtful or false judgments, accidental definitions and artificial divisions make up the total. Scientific systems are sciences, and a classification of scientific systems is a classification of the sciences. It is needless to say that it is only with scientific arrangements that science has to do. In so far as there is any co-ordination of knowledge, any systematisation, so far is knowledge proceeding to science. Every system, even the most crude and artificial, is hence scientific so far forth as it is system. And in dealing critically with any arrangement, the process is one of scientific ordination. Those classifications which are useless for the purposes of science are discarded, and have no place in a scientific treatise. So that only in a relative sense are systems divisible into the empirical and scientific. The former may be characterised and noted as existing, but in this very process they come to be a portion of and to play a part in a scientific system. Even the empirical systems, by virtue of their being systems at all, are scientific and occupy a rank (though perhaps a low one) among the achievements of science.

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[1] Porter, *Human Intellect*, Part III. Chap. IV.

§ 3. Systems are divisible into the two general classes of Theoretical and Practical. The former are systems of truths arranged with reference to cognition; the latter, systems arranged with reference to action. Theoretical truths are expressed in the indicative mode; practical in the imperative or in expressions equivalent thereto. The ultimate object of theoretical science is *to know*, of practical science *to do*. The one concerns immediately the department of intellect; the other the department of will. Theoretical science is science as apposed to art. The systems of the former have their principles in the form of doctrines or assertions respecting matters of fact; the latter have precepts or rules. 'The relation in which rules of art stand to doctrines of science may be thus characterised. The art proposes to itself an end to be attained, defines the end, and hands it over to the science. The science receives it, considers it as a phenomenon or effect to be studied, and, having investigated its causes and conditions, sends it back to art with a theorem of the combination of circumstances by which it could be produced. Art then examines these combinations of circumstances, and, according as any of them are or are not in human power, pronounces the end attainable or not. The only one of the premisses, therefore, which art supplies, is the original major premiss, which asserts that the attainment of the given end is desirable. Science then lends to art the propositions (obtained by a series of inductions or of deductions) that the performance of certain actions will attain the end. From these premisses art concludes that the performance of these actions is desirable, and, finding it also practicable, converts the theorem into a rule or precept. . . . Art, in general, consists of the truths of science arranged in the most convenient order for practice instead of the order which is most convenient for thought. Science groups and arranges its truths so as to enable us to take in at one view as much as is possible of the general order of the universe. Art, though it must assume the same general laws, follows them only into such of their detailed consequences as have led to the formation of rules of conduct; and brings together from parts of the field of science most remote from one another the truths relating to the production of the different and heterogeneous conditions necessary to each effect which the exigencies of practical life required to be produced.'[1]

§ 4. Systems may also be classified with regard to their generality; they may also be classified variously, according to the matter of which they are composed, and according to the form in which that matter is arranged. Inasmuch, however, as classifications of sciences have been given in the introduction, we need not dwell upon them longer in this place.

§ 5. The data of every science are the particular facts to be arranged; the process of systematisation is one of gathering together in groups and declaring the similarities. A scientific system, then, rests upon and concerns itself with various notions and with their expression in principles. Every science has its own proper notions, and its principles of all degrees of generality from *principia minora* to postulates. In order to complete a scientific system it is necessary, after making out the boundaries of the system in a provisional manner, and making whatever provisional assumptions are necessary, to collect all the particular facts possible which are within those limits, to generalise into principles the facts obtained, to ascertain and define the notions concerned. When all the particular facts have been collected and scrutinised, when the notions have been ascertained and defined, the limits of the system corrected and made clear, and when all the data have been generalised into principles in their various orders of generality, and those generalisations verified in the most complete manner possible—when all this has been accomplished, the highest degree of knowledge of which man has any conception has been reached in a particular department. And when all branches, departments, systems, and sciences have been similarly integrated into one general science of sciences, then, if ever, universal knowledge will have been reached and knowledge itself will be complete and perfect.

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[1] Mill, *System of Logic*, Bk. VI. Chap. XI.

CHAPTER LVII.

SOME THEORIES OF INTUITIONAL KNOWLEDGE.

§ 1. THE great controversies that have arisen over the subject of intuitional knowledge, and the wide differences that have existed among philosophers with respect to what constitutes intuition and to what knowledge the term ought to be applied, warrant a critical examination of some theories that have been advanced, in addition to our expository consideration of the subject (Chap. XXXVIII.).

§ 2. President Porter, of Yale College, in a work on 'The Human Intellect,' after giving what treatment he desires to presentative and representative knowledge, heads the fourth and crowning part of his treatise, *Intuition*, *The Categories*, *First Principles*; and proceeds to state what the 'cognitions or beliefs' of which he is speaking have been denominated. He follows Hamilton's enumeration, and in his smaller work (an abridgment of the other) mentions the ensuing: 'Intuitions, categories of thought, first principles, self-evident or intuitive truths, primitive notions, innate cognitions, metaphysical or transcendental truths, ultimate or elemental laws of thought, primary or fundamental laws of human belief, pure or transcendental or *à priori* conditions.'[1] This catalogue even (which is sufficient for our present purpose) is perplexing enough, but Sir William Hamilton's list in his 'Note A' in Reid exhibits a still greater and most astonishing variety of characteristic names synonymous with *intuition*, all indicating the same things, or what are supposed to be the same things, though he does not agree with President Porter in giving the place of honour to the name *intuition*.[2] It would be impracticable in a review of this character to refer to *all* the applications of this much-abused word. In specifying two or three methods of its employment, I will cite cases, marking the chief positions taken by those who claim the right of using *intuition* to designate knowledge beyond the presentative.

§ 3. Dr. Campbell, in his celebrated work on the *Philosophy*

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[1] *Intellectual Science*, Part IV. Chap. I.

[2] Sir Wm. Hamilton's *Philosophy*; Wight's Ed. New York, 1857, p. 50 *et seq.*

of Rhetoric,[1] gives an exposition of *Intuitive Evidence*. He says, 'Logical truth consisteth in the conformity of our conceptions to their archetypes in the nature of things. This conformity is perceived by the mind either immediately on a bare attention to the ideas under review, or mediately, by a comparison of these with other related ideas. Evidence of the former kind is called intuitive; of the latter, deductive.' The author divides intuitions into three classes, those that result from *Intellection*, which term he prefers to perception, from *Consciousness*, and from *Common Sense*. In the first class he includes 'in brief all axioms in arithmetic and geometry. These are in effect but so many different expositions of our own general notions taken in different views.' 'In fact, they are all of them reducible to this axiom, *Whatever is, is*. I do not say they are deduced from it, for they have in like manner that original intrinsic evidence which makes them, as soon as the terms are understood, to be perceived intuitively. And if they are not thus perceived, no deduction of reason will ever confer on them any additional evidence. Nay, in point of time the discovery of the less general truths has the priority not from their superior evidence, but solely from this consideration that the less general are never objects of perceptions to us, the natural progress of the mind in the acquisition of its ideas being from particular things to universal notions, and not inversely.' By means of consciousness, Dr. Campbell esteems the mind to know intuitively its own existence and its 'actual feeling, impressions or affections, pleasures or pains, the immediate subjects of sense taking the word in the largest acceptation.' As contrasted with these latter intuitions the former source [Intellection] gives 'rise to those universal truths, first principles, or axioms, which serve as the foundation of abstract science.' Common sense, according to Dr. Campbell, is the source of such intuitive truths as, 'Whatever hath a beginning hath a cause,' and 'The future will resemble the past.' Such truths as these are not of such a character that the denial of them implies contradiction. If anyone objects to the title of *intuitive*, the author will accept here *instinctive* in its place. From these statements we gather three classes of cognitions which the writer deems intuitive; namely, presentative cognitions (apprehended by intuitive consciousness); general notions or principles which are axiomatic and universal, the denial of which implies contradiction; and truths which are universal, but the opposites of which are not inconceivable. The act of intuition produces these intuitions, and that act is the immediate perception 'on a bare attention to the ideas under review' of the 'conformity of our conceptions to their archetypes in the nature of things.' There is a suspicion aroused of want of definiteness in the author's mind as to the meaning he would attach to *immediate*, but his reference to mediate cognition as taking place by a 'comparison' of 'related ideas,' rather compels us to suppose that he employed the word in the scientific sense described by Locke in his phrase, 'without the intervention of any other ideas.' Dr. Campbell has not favoured us with an explanation of what he intends to convey by 'archetypes in the nature of things'; but, inasmuch as he holds that the natural progress of the mind is from particulars to generals, and thus that the earliest knowledge we have is of objects of perception, it might fairly be inferred that we are to look for these archetypes in the world outside the mind. Or if he meant that these archetypes are patterns within the mind, still in his view they would be generalisations from sensational experiences. They must be in the order of nature or in representations of that order, since they are 'in the nature of things' and since the 'natural progress' of the mind is 'from particular things to universal notions,' and not inversely. According to his view we must look for archetypes in presentative experience; if he had held that the progress of the mind is from generals to particulars, then we might assume that he believed in ideal archetypes in the mind similar to the ideas of the Platonists; but the positive declarations he makes in favour of the other method of regarding the mind's movement are an effectual bar to such a construction. Having premised thus much, on examining Dr. Campbell's three classes, we see at once that we shall have little difficulty with the second one. We can agree with the author that the mind knows intuitively 'the immediate subjects of sense,' 'our actual feelings, impressions, or affections, pleasures or pains.' We can also allow that we know intuitively our own existence at a given moment, though knowing our own existence, as we commonly understand the phrase, requires, as has been shown, memory and so far involves mediate cognition.

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[1] Part I. Bk. I. Chap. V.

§ 4. In the case of the axioms and common-sense principles cited, as '*The whole is greater than its part*' and '*The future will resemble the past*,' which this author says are intuitively perceived, this criticism must at once be made: If the author admits or avers that these principles are generalisations, and so he seems to declare with reference to all axioms of arithmetic and geometry, how will he succeed in showing that they are also apprehended and their congruity with the nature of things established without a comparison with other related ideas? And this he must do, for he considers intuitive apprehension as 'immediate' perception as contradistinguished from an acquisition of knowledge by such comparison. Certainly he could not claim that the future will resemble the past unless the past be remembered, and memory of the past would bring up a vast multitude of experiences in idea, by comparison of which it would appear that nature has repeated herself, from which the inference is drawn that she will continue to repeat herself. It does not need argument to show that here the truth is reached by a comparison of ideas, that is, according to Dr. Campbell's own definition, mediately and not intuitively. The only 'archetypes in the nature of things' are the individual instances of repetition in the past, and these instances are known and brought together through the medium of remembrances. Similarly with the axiom, '*The whole is greater than a part*,' the truth of which we know by 'intellection,' and others of like kind. Upon Dr. Campbell's own grounds the archetypes with which conformity of the conception is to be 'immediately' perceived, are either wholes seen to be greater than a part, or are generalisations from such experiences. If the former, certainly the agreement of the conception with the order of nature is cognised through representations of these particulars, and thus mediately; if the latter, the archetype is a general notion of the mind which finds its expression in such language as is above given, and the conformity of the conception to its archetype is merely an identity of ideas. That an idea is identical with itself may be said to be seen intuitively and immediately (though the representative element is not absent); but I must think this is not what Dr. Campbell means; he designs to declare that the general expression is an intuitive truth; and in this view on his own definitions and explanations of *intuitive* and *intuition* as of knowledge gained immediately 'on a bare attention to the ideas under review,' without a comparison 'with other related ideas,' this use of the terms is absurd. Without the characteristic of immediateness, intuition has no meaning; and with that attribute to call a general notion or principle an intuition is to confound perception and memory. Therefore, omitting the minor criticisms on Dr. Campbell's view which might be made, enough has been said to show the confusion in which they are involved by his attempt to make the name *intuitive* apply to general and abstract knowledge.

§ 5. The embarrassments in consequences which result from a failure to preserve the distinction between immediate and mediate cognition, are conspicuous in a more recent work, which aims to vindicate the doctrine that there are truths independent of experience, and that such truths may justly be regarded as intuitions. I refer to 'The Intuitions of the Mind,' by Dr. James McCosh, President of the College of New Jersey, and formerly Professor in Queen's College, Belfast. With the origin and nature of the truths of which this able author assumes to treat, and as to whether in any proper sense they can be esteemed independent of experience, this chapter is not principally concerned. Our business now is with questions relating to the propriety of the use of the terms *intuitive* and *intuition* as characterising such cognitions as those indicated. Dr. McCosh makes very free with these names, and does not hesitate to carry their application into ethics and theology; thither we shall not follow him, but confine our remarks to the general views he maintains, and to his exposition of primitive cognitions, beliefs, and judgments.

§ 6. This philosopher regards our primitive and necessary convictions as being intuitions. His justification for 'the special name *Intuitions* applied to them,' is their immediateness. 'They see the object as it were face to face, and with nothing coming between to aid the view on the one hand, or obstruct it on the other. . . . In every intuition we look at once on the corresponding object; it is thus we are conscious immediately of self in action; thus that we gaze on body as occupying space; thus that we regard space as unbounded; thus that we regard a certain disposition as good or as evil. But to prevent misapprehension it is necessary here to offer an explanation. When I say that the object is present, I do not mean by this that the object must be a bodily one or one external to the mind. The object may even be represented in a loose and inaccurate sense as an absent one. Thus I may pronounce of an event which happened far away in India, that it must have had a cause. . . . But then it is not, properly speaking, to the distant event that the intuition looks, but to the representation of it in the mind. It is only mediately through the representation that the intuition can refer to the actual occurrence, and this on the supposition that the representation is correct; and if the representation be erroneous, or even mutilated, or imperfect, it cannot be legitimately applied to the event. Correctly speaking the object is always present when the intuition gazes on it; it is either a bodily object immediately before the mind, or it is a presentation or representation within the mind itself.'[1] From this passage, which occurs in a chapter on the general character of intuitions, we infer naturally, and legitimately I think, that we may intuitively know an object external to the mind and an idea in the mind; that the latter may be presentative or representative; that so far as it is representative we have an immediate cognition of the idea as such, while of that which is represented we have only a mediate cognition. Living on the British Isles and having an idea of the Himalayas or Andes (to use one of Dr. McCosh's illustrations) we know that idea immediately; the Himalayas or Andes we know mediately. From what has been quoted it does not appear whether the writer would esteem the mediate knowledge of the Himalayas or Andes any the less mediate if, having seen them, he should be entertaining in mind a recollection of their appearance, but in a subsequent part of his work he allows the difference between presentative and representative knowledge as made by Sir William Hamilton, and endorses the quotation:—'Speaking of memory he [Hamilton] says, "It is not a knowledge of the past at all, but a knowledge of the present and a belief in the past."' Dr. McCosh himself observes in the same connection, 'In representative knowledge there is an object now present representing an absent object. Thus I may have an image or conception of Venice with its decaying beauty, and this is now present and under the eye of consciousness; but it represents something absent and distant, of the existence of which I am at the same time convinced. When I was actually in Venice . . . . there would be no propriety in saying that I believed in the existence of the city; the correct phrase is that I knew it to exist. I know too that I have at this moment an idea of Venice; but as Venice itself is not before me, the proper expression of my conviction is that I believe in its existence. I maintain that whenever we have passed beyond presentative knowledge and are assured of the reality of an absent object, there faith—it may be in a very simple form, but still real faith—has entered as an element. . . . We have immediate knowledge always with us, we have self in a particular state or exercise; but rising from this we believe in an object which is absent—in the loftier energies of faith we believe in objects which we have never seen and which we never can see in this world. According to this account we are said to know ourselves and the objects presented to the senses and the representations (always, however, as presentations) in the mind, but to believe in objects which we have seen in time past, but which are not now present, and in objects which we have never seen, and very specially in objects which we can never fully know, such as an Infinite God.' There is only one conclusion to be drawn from these extracts as to the author's meaning; he designs to exclude representative knowledge from the category of immediate knowledge, upon a reasonable interpretation of his remarks. He could not state more explicitly that presentative cognition is immediate, and that whatever knowledge we have which is not presentative is mediate. It is scarcely necessary to add that this accords entirely with our own exposition. Now, I suppose no more astonishing statement could be made to a reader of the foregoing, who is not familiar with 'The Intuitions of the Mind,' than to say that Dr. McCosh actually devotes a large subdivision of his work to the consideration of Primitive *Beliefs*, treating them and characterising them as *Intuitions*! But such is the fact, however surprising. I think any student of philosophy would be exceedingly glad to know what can possibly be meant on Dr. McCosh's premisses, by an *intuitive belief*. After having been distinctly informed that the pertinence of the names *intuition* and *intuitive*, as applied to any cognition, depends upon the immediateness of that cognition, and that there is an appropriate division of cognitions into presentative and representative, by which the immediate fall into the former class and the mediate into the latter, and that belief is a matter of representative and mediate cognition—after all this, we are invited to the survey of *beliefs* as among the Intuitions. If this were the way all philosophers served us, we might as well give up the idea of ever having an exact and accurate philosophical terminology or nomenclature. In all probability the learned author would say that what he intended to treat of was certain beliefs that are universal and necessary; if so, very well; but upon his own definitions what shadow of right has he to call them intuitions?

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[1] *Intuitions of the Mind.* London, 1860. Part I. Bk. II. Chap. I. pp. 46, 47.

§ 7. Dr. McCosh, in numerous places, insists that we have intuitions *only* of and in relation to individual objects. 'Intuitions *primarily* contemplate objects as individuals. If I know or believe in anything, it is an existing thing, that is, as singular. If I form an intuitive judgment, that is, make a comparison, it is still, in regard to two or more objects, considered as singular; and so far as we pass beyond this, there is always, as I shall endeavour to show, a discursive process involved. . . . Intuitively the mind contemplates a particular body as occupying space, and being in space, and it is by a subsequent intellectual process, in which abstraction acts an important part, that the idea of space is formed. Intuitively the mind contemplates an event as happening in time, and then, by a further process, arrives at the notion of time. The mind has not intuitively an idea of cause or causation in the abstract, but, discovering a given effect, it looks for a specific cause. It does not form some sort of vague notion of a general infinite, but fixes its attention upon some individual thing, such as space, or time, or God; it is constrained to believe it to be infinite. . . . The same remark holds good of the intuitive judgments of the mind, that is, when it compares two or more things, and proclaims them at once to agree or disagree. I do not, without a process of discursive thought, pronounce or even understand the general maxim that things which are equal to the same things are equal to one another, but on discovering that first one bush and then another bush are of the same height as my staff, I decide that the two bushes are equal to one another. . . . The boy decides that the ball which he holds in his hand cannot be at the same time in the hand of some other boy, who may pretend to have it; but he has not meanwhile consciously before him the formula that it is impossible for the same body to be in two places at the same time. The individual conviction is in all men when the objects are pressed on their attention; the general maxim is the result of thought, and especially of abstraction and generalisation.'[1] 'The mind does not, in its spontaneous operations, declare that it is impossible for the same thing to be and not to be; but, on being satisfied that a certain thing exists, it at once sets aside the thought or assertion that it does not exist. It does not affirm, in a general proposition, that no two lines can enclose a space; but it says these two lines cannot enclose a space, and it would say the same of any other two lines.

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[1] *Intuitions*, Bk. I. Chap. II. Secs. 4, 5.

. . . It is out of these individual judgments that the general maxim is obtained by a process of generalisation.'[1] From these and similar expressions one would expect to find Dr. McCosh discarding the terms *intuitive* and *intuition* in treating of general notions and judgments. After reading the foregoing passages we certainly should not imagine that he would speak of space in general as an intuition, or of our idea of time as an intuitive idea; yet we find this sentence: 'We intuitively know space and time; with this we start;'[2] and again, the author places among 'the qualities of matter known by intuition,' extension. Moreover among those judgments which the mind is led at once and necessarily to pronounce, and which the writer does not hesitate to characterise as intuitive, are the mathematical axioms, including, among others, '*Two strait lines cannot enclose a space.*'[3] Now, all the objections suggested by the employment of *intuitive* and *intuition* to mark generalisations on the part of Dr. Campbell apply equally to Dr. McCosh. Surely the latter would not contend that we can do without memory in generalising; but if we admit a reliance upon memory we introduce that knowledge which the author has himself denominated mediate in contradistinction to intuitive. How then, on his theory, can he properly call a general or abstract truth or notion an intuition, or rank it among the intuitions? I understand Dr. McCosh to hold that the cognition for which the word *space* stands is a general or an abstract notion: he says: 'it is by a subsequent intellectual process, in which abstraction acts an important part, that the idea of space is formed.' 'Of space in the concrete we have an immediate knowledge; that is, by the senses, certainly by some of them, such as the touch and the sight, most probably by all of them; we know bodies, say our own bodily organism, as extended, that is, as occupying space. By abstraction we can fix our attention on the space as distinct from associated qualities, and by inward reflection we can gather what are the convictions attached.'[4] Therefore (now to follow our own train of inference), according to Dr. McCosh, we know intuitively something extended; by a comparison of things extended we come to have a general notion of things extended; we thence, by a process of abstraction, form the notion *space*. *Space*, then, is the name of a cognition; there is no external reality *space*; Dr. McCosh would not claim that there is a reality *blackness* external to the mind, but only black objects agreeing in a common property which is gained by a process of abstraction and so named; in like manner the external reality corresponding to *space* is this, that, and the other, thing, all agreeing in the characteristic which is named extension, but extension and space (not to distinguish the two) have no other reality than a mental one; that is (let me guard against misapprehension), the names are names of an abstract cognition, through the medium of which we do cognise external reality, to be sure, though this external reality is not *space*, but rather A, B, C, D, etc. agreeing in a certain attribute, *space*. And even if it were space, whatever external reality is perceived is beheld mediately and not intuitively. Therefore, when Dr. McCosh asserts that we know space intuitively as external to the mind, he commits a solecism. He might claim, indeed, that if space be simply the name of a cognition, we know that cognition immediately, and hence know space intuitively; but, by taking this position, he would be obliged to ignore the concrete, out of which the abstract cognition *space* arises, and would, if he kept his place consistently, find himself landed in absolute idealism.

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[1] *Intuitions*, Part II. Bk. III. Chap. I. p. 241.

[2] *Intuitions*, p. 209. (London Ed. 1860.)

[3] *Intuitions*, p. 250 *et seq.*

[4] *Intuitions*, p. 202.

§ 8. In saying as he does in a passage before quoted that the object of an intuition 'is either a bodily object immediately before the mind or it is a presentation *or representation*[1] within the mind itself,' our author leaves a loophole by which to escape from such a difficulty as the one now before us; but if he chooses to avail himself of this mode of exit, he will find himself every time he uses it in a much worse dilemma than before, in that he will occupy the attitude of one denying the distinction between presentative and representative knowledge; for, if some representations be intuitions, why are not all representations intuitions? If so all our knowledge is immediate, and we know intuitively that we ate our three meals yesterday, that John Locke lived in the seventeenth century, and that the Himalayas or Andes are to-day existing, though we see them not:

§ 9. We might follow Dr. McCosh in a similar way with similar result through all his exposition of what he terms intuitions.[2] He speaks of time in the same style in which he discusses space; he is fond of dwelling on the 'intuitive convictions' of the mind, apparently failing to remember that conviction means belief, and that beliefs have been by his own act ruled out of the ranks of immediate cognitions; he endeavours to show that we have an intuitive cognition of the infinity of time and space as 'individual things,' and thence generalising, that we may have an immediate cognition of infinity, while demanding that we should refer for intuitive knowledge of substance not to 'being in the abstract,' but to 'something in being,' from which we are to set out to reach a complete idea of substance by 'discursive exercises;' yet he within five pages objects 'to our conviction in regard to substance being called a concept, a phrase denoting an abstract or general notion formed by a discursive process of the understanding; the conviction (he says) is an intuition.'[1] He allows being to the *summum genus*, 'in the ascending process of generalisation,' and that we cannot know it separate from a concrete existence; but yet he says, 'if any mean to deny that we can know being as it is, I maintain in opposition to them, and I appeal to consciousness to confirm me when I say that we immediately know being in every act of cognition.'[2] He affirms that 'our original judgment is not that every cause has an effect, and that every effect has a cause,' propositions that will not be admitted and cannot be understood till the words 'cause' and 'effect,' terms very abstract and general, be explained; but it is that this thing having power may produce an effect, and that this thing apprehended as a new thing or as having been changed, must have had a cause;'[3] and more than once he states unqualifiedly his approbation of the assertion that our knowledge of cause and effect is intuitive. I beg to ask how we can know any more intuitively that *this* thing had a cause than that everything has a cause, or why the word *cause* is any less 'abstract and general,' or less in need of explanation, in the former case than in the latter? The cognition expressed by the word *cause* is itself a product of generalisation, and it never enters the mind at all till sundry associations and comparisons of experiences are made, in other words till they are reproduced mediately. The same is true of the word *effect*. It would seem that Dr. McCosh allows this, for he says the words *cause* and *effect* are 'terms very abstract and general,' and abstract and general terms are terms standing for abstract and general cognitions. Once more, and with reference to axiomatic truth, it is said that 'as innate or regulative principles they are in all men at all ages; but it is wrong to represent them as being before the consciousness, as being immediately under notice, as being capable of being discovered without abstraction or generalisation, or observation, or trouble of any kind. . . . . As universal truths or general maxims they are in an especial sense philosophic principles, but then as such they are known only to comparatively few; they can be appealed to in argument only on the condition that their law has been gathered by induction and carefully expressed.'[1] Nevertheless, our philosopher has no scruple in calling these principles, truths, or axioms, by a common name, the essence of whose meaning is, on his own admission, immediateness of cognitions, without abstraction, generalisation, observation, or induction! I cannot think of anything more misleading to the student or more perplexing to the mature thinker.

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[1] Italics mine.

[2] See *Intuitions*, p. 214 *et seq.*

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[1] *Intuitions*, p. 164 *et seq.*

[2] *Intuitions*, p. 161 *et seq.*

[3] *Intuitions*, p. 258.

§ 10. As an exponent of the intuitional school, Dr. McCosh may be described as occupying a position considerably in advance of the main body of its members. This eminence he has reached through a keen appreciation of the necessity for inductive method in dealing with mental facts, and his apprehension (however inadequate) of the difference between presentative and representative knowledge. To the incompleteness of this conception, and to the inconsistencies and incongruities attendant, may be ascribed nearly all the imperfection visible in his work.

§ 11. Other metaphysicians than the President of the College of New Jersey exemplify the same confusion resulting from want of consistency in the use of the term *intuition*. Dugald Stewart never thought himself quite clear on the subject. The whole philosophy of Dr. Whewell is made chaotic by a series of misconceptions of which his view of intuition is one, though his use of that word is not particularly prominent. Dr. Thomas Brown fell into the same error. Better things might have been expected of both Stewart and Brown; but neither one of these philosophers ever emancipated himself thoroughly from the control of Reid, though sometimes taking issue with the latter and successfully opposing his positions. On the Continent, aside from the purely rationalistic philosophers, we find some thinkers who seem to have felt the necessity of an intuitive foundation for their philosophy of mind, and who started right but fell into like errors with some of those to whom I have been referring. Frederick Von Calker tells us that intuition is 'the perception of an external object by the means of our organs of sensation and the perception of the mind's activity through the means of an internal perception;' but he goes on to talk of a 'pure intuition' as 'synthetical unity simultaneous with space,' and as likewise embracing time.[1] Gioberti bases his philosophy on 'intuition as a condition and material for reflection,' but he ends with developing an intuition of the Supreme Being, 'as the basis of all demonstrative truth.'[2] The history of philosophy is full of instances, for which we have no space, showing a strange mixture of truth and error in regard to this matter of intuitive knowledge; and the error has been greatly heightened, real ignorance never removed by the explanations offered by a large number of thinkers, who will now, as a class, require our attention, and whom I have been reserving for separate mention.

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[1] *Intuitions*, pp. 54, 55.

§ 12. Sir William Hamilton, in his 'Note A' on Reid, gives a long list of philosophers who deny that our cognitions of space, time, substance, being, matter, motion, identity, infinity, beauty, truth, goodness, and the like, are in any sense whatever the results of generalisation and abstraction, affirming on the contrary that these are entirely different in kind from discursive cognitions, and are reached by a natural faculty or power which looks upon entities superior to sense, as the eye looks upon the landscape before it. This power or faculty has been designated in various ways. In Sir William Hamilton's catalogue, it is termed Reason (*Ratio*, Νοῦς, *Vernunft*) by St. Augustine, Kant, Fichte, Schelling, Hegel, Aristotle, Tertullian, Joannes Cameron, Malebranche, Lyons, Reid, Jacobi, Kœppen, Ancillon (the son). It is called Intelligence or Intellect (*Intelligentia*, *Intellectus*), by Boethius, Porphry, Theophrastus, Ammonius Hermiæ, St. Thomas Aquinas, Goveanus, and Poiret; to which list might be added Hugh St. Victor, John of Salisbury, and Gerson, following St. Bonaventure. It is termed Intuition (*Anschauung*, *Faculté intuitive*), by Hemsterhuis and Schelling, and sometimes by Jacobi; Natural Instinct, by Herbert of Cherbury, Leibnitz, and Ancillon, though Leibnitz also makes use of the expression *Light of Nature*, employed as well by Descartes; Conscience (*Conscientia*), by Keckermannus; Internal Feeling (*Sentiment intime*), by Buffier; and Common

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[1] Blakey's *Hist. of Phil. of Mind* (London. 1850) Vol, IV. p, 13.
[2] *Ibid.*

Sense (*Sens commun*, *Sensus communis*) by a host of writers, among whom are instanced Cicero, Omphalius, Mariana, Pascal, Fenelon, Buffier, Reid, and Beattie. But it should be said that not all of those relying upon the terms *Reason*, *Intuition*, and *Common Sense*, whose names have just been mentioned, hold to the doctrine that the mind has a faculty for knowing fundamental truth wholly apart from processes of observation and generalisation. Particularly must this be asserted of Reid and the Scottish school. The term Common Sense proves as fruitful a source of error and perplexity to many of these philosophers as did intuition to Dr. Campbell and Dr. McCosh, the result being that the Scottish philosophy exemplifies two conflicting tendencies, the one to make knowledge derivative from experiential sources, and built up by abstraction and generalisation, the other to find a source of cognition above and outside of experience. In so far as it is a philosophy of observation it is an improvement upon the prevailing German systems, while, so far as it seems to found knowledge in a supposed super-experiential basis, it is fruitful only in delusions and contradictions.

Jacobi and his worthy disciple and close follower Ancillon are perhaps the best representatives of the class or classes of philosophers who support the proposition that the mind, by a distinct faculty called Reason, Intuition or Intelligence, immediately knows truth transcending experience. Schleiermacher is no mean exponent of the same philosophy. In England, Coleridge is the most important name. None of these philosophers gave birth to a completed and connected system; their philosophy is contained in tracts, essays, and letters, not in elaborate treatises. Though the influence of these doctrines upon speculation cannot be denied, they are rarely subjected to searching analysis or thorough criticism, as their form is a serious obstacle to either process.

In many cases it is impossible to tell what belief was actually entertained; in others the propositions advanced are incomplete in statement and vague in their application. If we attempt to fill up the gaps in the one, or follow the other to a legitimate conclusion, we are subject to the accusation of misunderstanding and misinterpreting the author in exact proportion that his own statement of his view has been inexact and inaccurate. Dr. Laurens P. Hickok, formerly President of Union College, New York, has sought to develop, by the method we are considering, a complete system. We encounter in him what has long been a *desideratum* in his school—that order, that scientific expression (in attempt at least), that extensive formulation of the rational philosophy, for which we look in vain in Jacobi and Ancillon, in Schleiermacher and Coleridge. Therefore, whatever I have to say with reference to these thinkers will be based upon the works of Dr. Hickok.

§ 13. We shall not now be troubled with the inconsistency encountered in the cases of Dr. Campbell and Dr. McCosh, which is involved in the attempt to apply the term *intuition* to that which is conceded to be a representation and generalisation. Space and time, substance, and so forth, are not allowed by Dr. Hickok to be generalisations at all, or in any manner dependent upon or connected with generalisation. They are, as it were, phenomena to a faculty different in kind from any other, a faculty which looks directly and immediately upon the noumenal as the eye looks upon the 'fleeting phenomena of sense.' It is for us then to give as correct and comprehensive an idea as possible of what Dr. Hickok means to indicate as the characteristic feature of such a faculty, and subsequently or concomitantly to determine whether or not we have the capacity or power claimed.

§ 14. Dr. Hickok defines the Intellect as the 'capacity for knowing,' and states that 'the mind as intellectual capacity has three distinct functions of operation, and from which we are to recognise three different Faculties for knowing, each peculiar to itself in its forms of knowledge and the kind of cognitions attained. . . These three different Faculties in the one capacity for knowing are: 1. The Sense; 2. The Understanding; 3. The Reason.'[1] The Sense is 'the faculty for attaining cognitions through sensation.' The Understanding, or Discursive faculty is 'that Intellectual Faculty by which the single and fleeting phenomena of sense are known as qualities inhering in permanent things and all things as cohering to form a universe.'[2] 'The Sense is a *conjoining*, the understanding a *connecting* faculty.' 'In the Sense the object appears; in the Understanding it is thought. One is a perception; the other is a judgment.' The Reason is 'the capacity to attain principles which were prior to any faculty of the sense or of the understanding, and without which neither a faculty of sense nor of the understanding could have had its being, principles strictly *à priori*, conditional for both faculties: and in the light of these principles he [man] has an insight into both sense and understanding, and can carry his mind's eye all around and all through the processes of both perceiving and judging, and thereby make his knowledge to include the processes of intelligence itself. . . . It differs in kind from either the Sense or the Understanding. . . . That agency which *limits* cannot thereby *connect*, nor can either of these in the same function *comprehend*.'[1] By means of the reason we attain to universal and necessary cognitions (as space, and time, and cause) *à priori*. We arrive at 'the clear conception of the self-originator of being,' an 'Absolute Creator'; we attain unto 'Absolute Beauty'; unto 'The True,' and 'The Good,'—'absolute ideals,' 'archetypes,' by which all things are 'comprehended.' All these reason beholds 'by its own insight' and looks upon with 'the mind's eye.' These expressions are fair selections from Dr. Hickok's various expositions of the faculties of knowing, and of the reason as the highest of these. That we possess such a faculty as the latter, the author endeavours to substantiate by different arguments. As nearly as I can judge, the following are those upon which he most relies, though his language is often so obscure as to make it almost impossible to determine what he means; this obscurity he tells us in the preface of a revised edition of the 'Rational Psychology,' 'arises from the nature of the speculation, and nothing but more familiarity with this field of thinking can make any presentation to be perspicuous.' As a commentary upon the latter clause, I shall venture to remark that I, for one, began the study of philosophy with Dr. Hickok's works, have read, recited, re-read, and read them again through a period of eight years, and have endeavoured to make myself familiar with the 'field of thinking' to which he alludes; but, I regret to say, the more familiar I have grown with, the greater has grown the obscurity of, his expositions, until about the only thing that is clear in connection therewith is the conviction that the author has utterly and hopelessly failed to give anything like a scientific account of mind and its operations.

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[1] *Empirical Psychology* (New York, 1865), p. 111 *et seq.*

[2] *Ibid.* p. 127.

§ 15. But refraining from further prejudgment, the arguments are these:—

1. The brutes have a certain degree of intellectual power enabling them to perform the operations of conjunction and connection of phenomena; they have no power or interest in comprehending the operations of their own minds; no faculty for

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[1] *Empirical Psychology* (New York, 1865), pp. 156–7.

looking round and *looking through* these processes of knowing. Man has such a faculty, and that he can thus philosophise is evidence of a different kind of cognitive power.[1]

2. Logical processes exercised upon problems of the source and nature of things lead only to antinomies and contradictions; by these processes it is impossible to find the way out of the conditioned to the absolute.[2]

3. There is a spontaneous and perpetual demand for the recognition of an absolute above nature and comprehending nature. *Whence is nature* and whither *does it tend* are questions which cannot be repressed. This is evidence of a faculty which will satisfy such demands.[3]

4. There are principles strictly *à priori*, necessary and universal, conditional for experience; the mind intuites cognitions of this character, such as space, time, cause, substance, the absolute.[4]

5. We are able to form an idea subjectively, *à priori*, of how if there be a nature of things, it alone is possible to be; if then we find that such a nature of things *is*, it demonstrates that our original insight was by a faculty higher than experience, since before ascertaining the fact, it determined how the fact, if at all, must be.[5]

6. Expressive Symbols exhibit the work of the Reason, as a national seal or flag, class emblems, religious rights and ceremonies, language. The meaning of these would be void unless there were a Reason to interpret them.[6]

7. The recognition and comprehension of a moving force in outer objects (as in a machine) which unites and orders all parts and manifestations, is evidence of the Reason, so also the apprehension of the Beautiful, the True, and the Good, which can only be reached by the insight of Reason.[7]

8. Reason-knowledge is perfect, instant, comprehensive, knowing at a glance, and is also incessant knowing as a constant gaze.

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[1] *Empirical Psychology*, p. 155 *et seq.*; *Rational Cosmology*, p. 14.

[2] *Empirical Psychology*, p. 165; *Rational Psychology* (New York, 1861), p. 397 *et seq.*

[3] *Empirical Psychology*, p. 167; *Rational Psychology* (New York, 1861), p. 397 *et seq.*; *Creator and Creation*, p. 84 *et seq.*; p. 21.

[4] *Empirical Psychology*, p. 156 *et seq.*; *Rational Psychology*, p. 81 *et seq.*; 238 *et seq.*; 397 *et seq.*; *Rational Cosmology*, p. 51 *et seq.*; *Creator and Creation*, Chaps. II. and III.

[5] *Rational Psychology*, *General Method.*

[6] *Creator and Creation*, p. 87 *et seq.*

[7] *Creator and Creation*, p. 87 *et seq.*

Both the outer and the inner are together in thorough contemplation, and thus the Reason has in its grasp Absolute Truth.[1]

9. The mind is an originator of ideal patterns, archetypes, standards within itself which are the criteria of the external world and are not copies of experience. It has in a self-knowledge, models of taste, science, and morality. It has a self-activity, autonomy, and liberty.[2]

10. That we have such a faculty distinctive in kind, and giving us all our prerogatives of rationality, personality, and free and responsible originality, is sufficiently clear in the consciousness of, its own working.[3]

§ 16. The above are culled from various works of Dr. Hickok, and seem to be the prominent positions taken by him in support of his doctrine. They are not wholly independent, but together go to make up the author's strength. We shall notice some of their common features, and also refer to them in detail, as we proceed. But before examining these arguments specifically, it is necessary to get clearly before our minds what the author means by a faculty, and how one faculty is different in kind from another. The intellect, in the first place, is the *capacity* for knowing, which has three *faculties*. Dr. Hickok does not define the word *faculty*, so far as I am able to discover, except to say that it is a 'function of operation.'[4] The natural inference is that he makes a distinction between capacity and faculty as between a passivity and activity—*capere*, to take or receive; and *facere*, to do. Probably he would assent to Sir William Hamilton's explanation that 'powers natural and active are called faculties.'[5] If we may venture to assume thus much, in the absence of any more distinct statement from our author, a faculty of the intellect is nothing other than a cognitive power, an ability of the mind to exercise itself in cognising something. If then the three faculties before mentioned are wholly different in kind, we have in our mental constitution three distinct and peculiar powers of knowing. How are their differences made manifest, and in what do they agree? is the question which suggests itself to be answered. At least they agree in this, namely, in being powers of knowing. Cognition is itself a power, and is itself an ultimate fact of mind. *To know* is simply *to know*, and beyond this we do not get. Now all cognition implies a known, a knowing and a knower. We measure and determine our knowing by that which is known; were it not for the known we should not be aware of the knowing. The act of knowing is one and the same; hence any differences in powers of knowing are evidenced by differences in that which is known. These distinct powers of knowing then are one in the knowing, but are heterogeneous in respect to that which is known. The knower is the mind, which is supposed to be constant, the knowing is the act which is invariably the same, the known is variable. If therefore we can show a difference in kind in things known, we shall have all the evidence there is for a difference in kind of the powers of knowing; without the former we shall be unable to arrive at the latter. Dr. Hickok would seem to agree with us thus far, for he expressly states of the sense that 'it includes only the process of knowing and the peculiarities of that which is so known; and is thus *the faculty of attaining cognitions through sensation*';[1] in his exposition of the understanding he lays stress on the fact that by this faculty we know phenomena as connected; and in treating of the reason he first measures the faculty by its power to attain necessary and universal principles. Hence we must look to peculiarities of that which is known to reveal the differences in kind of the faculties of knowing. First of all, Dr. Hickok would admit that we know phenomena, both sensations external and internal, the latter being as he would term them, 'inner exercises'[2] of the mind. These we know by the sense, and they constitute one class of cognitions different in kind from any other. Then we know also phenomena as connected and inhering in a substance, a noumenon. These notions are cognised discursively by the understanding, and constitute a second distinct class of cognitions, different in kind from any other. In the third place we know all noumena, the nature of things, whether mind or matter, as comprehended by a supernatural, an absolute personality; we know archetypes, patterns, and standards which nature does not give. These ideas we attain intuitively by the reason, and they are different in kind from all others of other classes. Therefore, according to Dr. Hickok, we have three kinds of cognitions—sense-cognitions, understanding-cognitions, reason-cognitions, which are independent of each other, are not contained in, and do not intersect, each other, though they may be found in close conjunction. Let us see if this classification will stand.

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[1] *Creator and Creation*, p. 90.

[2] *Rational Cosmology*, p. 79 *et seq.*; *Rational Psychology*, pp. 410–446.

[3] *Rational Cosmology*, p. 76.

[4] *Empirical Psychology*, p. 111.

[5] Reid's *Works*, p. 221.

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[1] *Empirical Psychology*, p. 114.

[2] *Empirical Psychology*, p. 122.

§ 17. In the preceding chapters, and in the earlier part of this chapter, we have had brought out in various places the differences between presentative and representative cognitions. We have seen that every item of cognition has both elements in some degree; and indeed that there could be no experience in consciousness at all without representation; nor can there be any knowledge whatever without consciousness of agreement, difference, time, representation, and power. We cannot cognise a sensation as phenomenon without these elements. If we bear this in mind, the distinction between Dr. Hickok's sense-cognitions and understanding-cognitions vanishes. In order to perception, there must be memory; and in order to memory there must be perception. There is no evidence at all that man ever has perception of a phenomenon without connecting as well as conjoining the parts thereof into one common substance. The very dawn of cognition gives what Dr. Hickok terms a notion, that is, an idea of a substance in which attributes inhere. In a so-called phenomenal cognition there is every element which is found in a rational cognition. Suppose we start with a phenomenal cognition, as a bright patch of colour, however small you may please to make it. If it continues in consciousness sufficiently long to be appreciable, it is a cognition of an attribute in a substance; it is a colour of something, or at least it is the manifestation of colour: then add to this one experience another of another colour, others of other colours, still others of other qualities than colour, and by an association of them all we have a nature of things. Hence the only difference between what Dr. Hickok calls sense-cognitions and understanding-cognitions, so called by him, is a difference of degree. Having shown that perception cannot take place without memory, we have taken away all grounds of distinction in kind between sense-cognitions and understanding-cognitions, for Dr. Hickok expressly locates the memory and its products among the latter; and also having shown that the only difference between a perception of anything whatsoever and a knowledge of a nature of things is one of degree,—the difference merely between a knowledge of one and a knowledge of many, precisely the same powers and acts being required for the former as for the latter—we have completed the overthrow of the stronghold Dr. Hickok has erected upon a supposed difference in kind between the sense and understanding. A profounder and more careful analysis of cognition destroys the radical difference he makes between the products of his two first faculties.

Dr. Hickok might still say that there is a radical difference between the process of the intellect as sense and as understanding. He might urge that the former is an intuitive and the latter a discursive process. Yet accepting his own acknowledged definition, the first of these being an immediate beholding, the latter is a mediate cognising; the mind runs through various cognitions and binds them together—this process is excluded by him from immediate cognition, and has no place into which to fall except that of mediate cognition. With his explanations of discursive thinking, based upon the literal meaning of the word *discursus*, I am unable to see how Dr. Hickok makes it to mean anything other than that the mind associates together representations of cognitions into higher representative knowledge. If what he intends to establish is that we have a faculty of immediate cognising (sense) and one of mediate (understanding), meaning by *faculty* a power, there is no objection to be raised to his thesis. But unfortunately, even if this be his position, it is made useless to him by the same cause referred to in the last section, and to which we for a moment return: he does not apprehend that there can be no immediate cognition without mediate, and the converse; that intuitive knowledge is only relatively intuitive, and discursive only relatively discursive. He does not take cognisance of the fact that the two are inseparable elements of cognition, varying in regard to their respective predominance, but neither of them ever being absent. Dr. Hickok appears to think that by virtue of the sense alone in intuitive perception (exclusive of all mediate knowledge) we have a distinct and defined object in consciousness. His views seem to assume that the mind acquires certain cognitions which are complete and perfect of their kind, which it attains by a power called the sense, and which it stores away for use, arranged and labelled *sense-cognitions*; that it then takes these sense-cognitions, combines and connects them, and by a new power forms new packages of cognitions, which are labelled *understanding-cognitions*. Says the author, 'These qualities, as gained by sense, are single and separate in the consciousness. They are constructed one by one, and perceived only as so many different phenomena, and cannot by any observation or attention be put together as the attributes of one substance. They are known in their isolation, and not in their connection.'[1] Here is exhibited the essential vice of his whole method of procedure. Does it not occur to Dr. Hickok that to know an object as *one*—in its isolation—requires a connection as much as to know a dozen associated by a common bond of unity? The presence before the mind of a single phenomenon demands that very connecting process which is a mark of the understanding. Beyond this, an association of phenomena carrying with it, of course, an association of the noumena appertaining to the same, furnishes all the understanding-knowledge that Dr. Hickok dilates upon. Thus, through an inability to perceive and understand the interdependence of presentative and representative cognition, this philosopher is led into creating a distinction which is purely artificial and wholly contrary to the facts of mental experience.

§ 18. Having seen that there is at bottom no generic difference between Dr. Hickok's sense-cognitions and understanding-cognitions, and also noting that the grain of truth underlying his error is no other than the distinctive character of intuitive and mediate cognition, we will now look to the assumed fundamental difference between reason-knowledge, and all below it. Dr. Hickok holds reason-cognition to be intuitive, not discursive. We see with 'the mind's eye.' 'The operations of the reason affect the mind, and induce an inward sensation, which gives a content for the inner sense as truly as any exercise of either the faculty of the sense or of the understanding; and this content in the inner sense from the exercise of reason may be distinguished and defined, and thus brought clearly into the light of consciousness as readily as any other inner sensation.'[2] This sentence is a very fortunate one to find in Dr. Hickok's writings, for it gives us a specific explanation, not elsewhere advanced so plainly, of the manner in which the reason operates, and marks also in an unmistakable way the author's ascription of an intuitive character to reason-knowledge. It seems, then, that the reason induces an inward sensation, which is cognised only by the sense; that is, the reason does not cognise anything, it simply furnishes something to be cognised by the sense; it follows that reason cognition is but a variety of sense cognition. There does not appear to be any escape from this conclusion; but, if it be admitted, the reason is no longer, according to Dr. Hickok's own statements, a mode of knowing, but a source of knowledge. Or else, if it be a mode of knowing, it is so far from being a separate and different mode of cognition from the sense that it can only cognise through the sense. Thus we discover at the very threshold of Dr. Hickok's edifice of Reason—an edifice promised to be much more spacious and resplendent—that the entrance introduces us only to the same temple which he announces to have been left behind.

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[1] *Empirical Psychology*, p. 121.

[2] *Empirical Psychology*, p. 157.

§ 19. Moreover, if a content in sensation is induced by the operations of the reason, the reason as a source of knowledge must be either without or within the mind; but by hypothesis it is the latter. To say then that the mind is a source of knowledge to the mind can mean only that the mind furnishes ideas for its own contemplation. These are what Dr. Hickok probably would term *à priori ideas.* He may, therefore, here introduce his proof of the existence of the reason by the necessity and universality of certain ideas of the mind. As to the nature and origin of *à priori* truth so called, we will reserve all questions for discussion in another place; but even allowing the ordinary view of the *à priori* philosophers, Dr. Hickok is not helped in his attempt to demonstrate a faculty distinct in kind from the sense and understanding. If there be truth 'strictly *à priori*,'[1] having its source 'in the constitution of the mind,'[2] yet it is apprehended only through an inward sensation. So far is Dr. Hickok from here making out an independent faculty of knowing, that he directly appeals to the sense as the only means by which such knowledge can come into consciousness!

§ 20. Dr. Hickok might say that the sense conjoins these ideas, which are reason-products, the understanding connects, but the reason comprehends and alone has that insight which determines them to be reason-knowledge. This is to say that the reason discriminates some 'inner sensations' from others, making some to be sense-cognitions and some to be reason-cognitions. All these cognitions of both classes, however, are before the mind previous to this thing being done; that is, they are known, and without the aid of the reason. The work of classifying is a subsequent one, and involves judgment, reflection, and comparison. But these last are exercises of the understanding, according to Dr. Hickok. What, then, is left for the reason to do? And even if at the very beginning (were it possible) the reason be supposed to know its own without reflection, yet it could not so determine what is reason-knowledge, except by a distinguishing and defining operation; but such an operation is held by the author we are considering as a movement of the sense. Thus, from Dr. Hickok's own explanation of the way in which reason, by inducing an 'inward sensation,' brings knowledge into the mind, we can reach only a conclusion which wholly dispenses with reason as a faculty of knowing.

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[1] Dr. Hickok.

[2] Dr. Whewell.

§ 21. Having thus, in a preliminary manner, noted how Dr. Hickok's expositions are destructive of themselves, lest we be accused of a narrow interpretation of this philosopher, and of unfairly taking a single passage from one work, which the author might perhaps harmonise with the rest of his philosophy, either by explanation or by correction of what he has written, we will look more in detail at the arguments which have been enumerated. And first with reference to the distinctions in mental powers between man and the brutes. Dr. Hickok claims a difference in the particular that the latter have no comprehending power, no interest in the operations of their own minds. That man can be a philosopher is evidence of his having a special faculty of cognition, such as the reason. The assertion that brutes cannot philosophise in any degree is a purely gratuitous assumption. That they do not construct systems of philosophy is obvious enough; that they do not perpetuate the results of their own thinking is necessitated by the fact that they have no such recording devices as men possess in written language. But whether or no they have interest in their own processes of mind, so as in an inferior degree to philosophise, is something upon which we have no conclusive evidence. The only evidence we do have is from the results of an inquiry as to their possessing those mental powers which in their highest exhibition in men lead to philosophy. Upon this point we may observe that the operations of comprehending, looking around, in and through mental acts, are all operations of reflection. The mind turns 'the attention inward upon its own action.' It holds 'itself out to its own inspection,' and turns 'itself round on all sides to its own observation.'[1] The mind must arrest its own ideas in their onward flow, and make them the objects of its attention; it must review its own movements, recall its own thoughts and trains of thoughts. This leads us to notice further that no comprehensive view of mind and mental performances is reached without memory. In a philosophy we do not take the mind as it is at a given instant, but we bring before us the mind as it has been in the past, perhaps throughout our whole past life; we can hence make no progress in attaining a system of philosophical knowledge and dispense with memory. Moreover, in turning our thoughts inward to the mind's operations, we have occasion for connecting subject and predicate in judgments. A thought in relation to mind has its subject and its predicate, if it be distinct, as much as a thought in regard to anything else. Once more, there is an association of thoughts. We have a congeries of judgments in regard to mental operations which together constitute our philosophy. Also, in acquiring any scientific knowledge, we have in the mind ideas recognised as such; accordingly there are concerned in this reason-comprehension internal perceptions distinguishable and definable. Very likely, too, there is present conception or association of particulars under a general notion. These are the chief operations concerned in the study of mind's action. With them we can philosophise. But all of these are faculties of the understanding, according to Dr. Hickok; and most, if not all, are allowed by him in some degree to the brute creation. Certainly animals have memory and association, and also perception. Whatsoever mental powers they do own are the chief powers which men use in philosophising, the difference in the two cases being one of degree, not of kind. We discover that the brute creation has in its degree the very powers which man employs to look in and through his own mental operations; we infer properly, therefore, that the brutes to some extent do the same thing for their mental performances. Dr. Hickok does not show facts which would destroy such an inference.

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[1] *Empirical Psychology*, p. 16.

§ 22. But setting aside the question whether or not brutes philosophise, the fact that man does is so far from proving him to be endowed with a peculiar and higher kind of knowing, that analysis of what is involved in philosophical comprehension brings out only evidence of the exercise of powers which are specially assigned by Dr. Hickok to the departments of the sense and understanding. In philosophising, the mind makes its own ideas and their relations objects of study in the same manner as it makes external things objects of investigation. That it may do this is involved in the power to know a cognition as a cognition, an idea as an idea, and in its ability to distinguish presentative from representative knowledge; but this ability which, so far as I can see, is all that is fundamentally requisite for philosophising, is accounted for and explained by Dr. Hickok under the sense and understanding.

Many people seem to imagine that it is necessary in order to vindicate the dignity of man's nature to establish as great a difference as possible between man and the brute. They love to call the beasts of the field *things*, and men *persons*, and to consider that in so far as men have the characteristics of the lower animals, they are degraded. It will hardly be necessary to treat this topic exhaustively, for two considerations are clearly opposed to such a course. In the first place, boasted reason may often receive salutary lessons in practical well-doing from simple instinct, and in the second, a dignity which can maintain a lofty position only by the forced abasement of its surrounding members may safely be called spurious. That there are great differences between human nature and inferior animal nature no one will deny; but that these differences are differences in kind is not a matter that can be assumed. On the contrary, whatever evidence we have seems to point to a conclusion exactly opposite. Therefore, before Dr. Hickok founds an argument for the existence in man of a reason upon a difference in the kind of intelligence possessed by man over the brutes, he must bring forward some sort of proof, based on admitted or probable facts, that there is such a difference. This he has not done and perhaps would think supererogatory, but whatever his own views he must not expect other people to receive without question his *ipse dixit* in reference thereto.

§ 23. It will be advisable here to consider a little further this power of comprehension which is with Dr. Hickok a distinctive characteristic of the reason. This word has at least two prominent significations. In one of these it is synonymous with *apprehend*, and means to know (generally). Anything which is apprehended comes into consciousness, and anything which is cognised is apprehended. It also has a more specific meaning, *to grasp together* or *embrace*. The latter seems to be the sense in which Dr. Hickok used the term; if it were not, but the former signification were the one intended, there would certainly be no difference in kind between reason-cognition and other cognition, both being processes of apprehension. What is it then that the reason holds in its grasp? (1) Is it those items of experience which must be joined in unity in order to take an appreciable cognition? Is it necessary to comprehend in order to cognise? Or (2) does the mind comprehend phenomena in cognising them as in a whole of experience or as in a nature of things? Is our knowledge of nature or the universe one of comprehension? Or again (3), is it only our own processes of knowing that we comprehend by the reason? The first set of these questions Dr. Hickok answers in the negative by setting up a separate faculty below the reason (the sense) for the purpose indicated. The understanding is in like manner made the faculty for cognising phenomena as in a whole of experience—a nature of things, save that the reason, as we shall presently see, is brought in to fill out this latter knowledge. With this last-named reservation then, there is left only the third interrogation. This may be answered affirmatively; what the reason comprehends is our processes of knowing. Yet here again is ambiguity. Does the author mean to assert by the words *comprehend* and *comprehension* that the mind knows its own powers of knowing, that it systematises and classifies its mental operations, or does he intend to say that by reason it comprehends in the sense of understanding or knowing thoroughly? So far as I am able to make out Dr. Hickok relies upon both meanings. He has two phrases by which he loves to characterise the reason's attributes, the one is its power of *comprehension*, the other that of *insight*. From Dr. Hickok's explanations it would sometimes seem that the latter term is the more appropriate to indicate a knowing, thoroughly, but he unmistakably applies the designation *comprehension* to that as well as the other. Moreover, though he expressly applies the term to a knowledge of one's own powers of knowing, and declares that we know phenomena by the sense and noumena by the understanding, he yet makes a comprehension of nature essential to a thorough knowledge thereof. He asserts that 'the human mind does comprehend universal nature in the absolute.'[1] 'An understanding . . . is a faculty for connecting phenomena in a determined experience in space and time through the notions of substance, cause, and reciprocal influence,'[2] but to enable us to *comprehend* nature, a reason is required. 'Humanity in its sentient nature comprehends nothing, and only as it rises within the sphere of the rational and stands out in the prerogatives of its free personality, can it possess the conditioning law for all comprehension. The perceptions, and wants, and judgments are wholly enchained in the prison-house of nature, and all intelligence circumscribed and concluded with no comprehensive capacity; and only as man awakes in the higher consciousness of rationality and freedom does he know, or even dream of, or care for any existence beyond his dungeon, or have any impulse to inquire what he or his prison of nature is. . . . In virtue of this only, it is that he can rise above nature and comprehend his own operations and products, while the brute is all nature and can comprehend nothing.'[1]

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[1] *Empirical Psychology*, pp. 167, 168.

[2] *Rational Psychology*, p. 282.

At this point, as well as at many others in the course of Dr. Hickok's writings, there is some uncertainty as to the precise meaning of the terms employed. Such uncertainty is always perplexing, but becomes especially annoying when joined to a lively suspicion that we have fared as well as the author, for he nowhere lays down definitions by which he abides throughout his works as explaining the functions of the reason. On some of his principles it is not easy to see how he could define the reason or its powers. For if he tried to do so he would be sure to find himself deserting the *à priori* position he seeks to maintain, and availing himself of the delusive and dangerous processes of the understanding which have no relevancy to or capacity for supernatural truth. Not scorning to use the tools which Dr. Hickok considers of too base a metal to serve in dealing with rational knowledge, I shall apply the very ordinary and common-place operations of analysis, comparison, association, and judgment in the endeavour to ascertain of what interpretations the author's language is naturally susceptible and whither it leads us.

§ 24. If comprehension be a power of knowing our own processes of knowing, then the remarks apply which were made not long before, by which all the attempts at a distinction between the reason and the sense and understanding, which Dr. Hickok makes, were shown to be nugatory. If Dr. Hickok's own explanation of the way in which reason operates, namely, by inducing an 'inward sensation,' be accepted, it was seen that the reason is not a kind of knowing but a source of knowledge, and reason-knowledge is apprehended only by the sense. And if the author's view thus expressed be rejected, then it is not easy to see how we can know at all by the reason; for cognition always implies an object of cognition, and every object of cognition, if it be an object, is a distinct and separate thing thrown before the mind, and distinguishing is an operation of the sense. If there be no distinguishing and defining there is no knowing. To conclude this line of remark, which it is not necessary to pursue farther, I subjoin an extract from Sir William Hamilton in reference to

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[1] *Rational Psychology*, p. 418.

Reid's adoption of consciousness as a distinct faculty, or so much of his argument as has application to the assumption that we have a separate faculty for knowing our own knowledge and processes of knowing:—

'It is impossible . . . . to conceive a faculty cognisant of the various mental operations without also being cognisant of their several objects.

We *know*; and *we know that we know*: these propositions *logically* distinct are *really* identical; each implies the other. We *know* (i.e. feel, perceive, imagine, remember, etc.) only as we *know that we thus know*; and we *know that we know* only as we know *in some particular manner* (i.e. *feel*, *perceive*, etc.). So true is the scholastic brocard: '*Non sentimus nisi sentiamus nos sentire; non sentimus nos sentire nisi sentiamus.*' The attempt to analyse the cognition *I know*, and the cognition *I know that I know*, into the separate energies of distinct faculties is, therefore, vain. . . . A mental operation is only what it is by relation to its object; the object at once determining its existence and specifying the character of its existence. But if a relation cannot be comprehended[1] in one of its terms, so we cannot be conscious of an operation without being conscious of the object to which it exists only as correlative. For example, we are conscious of a perception, says Reid, but are not conscious of its object. Yet how can we be conscious of a *perception*, that is, how can we *know* that a perception exists—that it is a perception and not another mental state—and that it is the perception of a rose and nothing else; unless this consciousness involve a knowledge (or consciousness) of the object which at once determines the existence of the act—specifies its kind and distinguishes its individuality? Annihilate the object, you annihilate the operation; annihilate the consciousness of the object, you annihilate the consciousness of the operation.[2]

Though objecting to some of the modes of expression in the above quotation, I can endorse it substantially, and think it makes tolerably clear the point that our faculty for knowing our own operations of knowing is no other than, nor different from, our faculty of knowing in general. Hence reason-knowing presents no peculiarities to separate it in kind from sense-knowing or understanding-knowing, and we look in vain here for any adequate evidence of a supersensual faculty of reason.

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[1] Sir W. Hamilton does not use *comprehend* in any technical sense.

[2] Wight's *Hamilton*, p. 172 (Note on Reid).

§ 25. Possibly Dr. Hickok would claim that we are ascribing to him views he never intended to hold. Perhaps he would say he never meant to assert that knowing a particular cognition as such was an act of reason-comprehension; but that the latter only enables us to study and know all our knowledge and all our processes of knowing taken together; in other words, that by reason we make a synthesis of the various operations of the mind with their products, and thus view them as an orderly consistent whole. If he should assume this position, I think nothing more is needed to show the futility of it than to point again to the fact that memory, and other understanding-operations, are indispensable for such a synthesis as we are supposing. We cannot comprehend, in the sense of embracing all our processes of knowing (any more than in other senses), unless we can recall what those processes have been, and in what ways they have been exercised. And if we remember, associate, classify, abstract, generalise, judge and so forth, do we not make up the whole of what is requisite for a complete arrangement of our knowledge and processes of knowing? Do we not create a system of mental philosophy? Again, do the exigencies of the argument force us to the conclusion that the powers of the understanding are sufficient for all the purposes which a reason could serve; and we must acknowledge that the comprehension of our knowledge and knowing, far from being the peculiar province of an independent and intuitive faculty of the mind, is wholly accounted for in the analysis or faculty that is confessedly neither. In short, whether we regard reason-comprehension of our processes of cognition as comprehension of a particular cognition as a cognition, or whether we look upon it as an ordered arrangement and systematic holding together of our various mental operations and products, we find its work is covered by the author's faculties of the sense and understanding. While, then, the requirements of a correct classification necessitate the exclusion of Dr. Hickok's reason from the list of the fundamental powers of the mind, practical considerations of some importance also urge us to the same result. It is not only of no aid, but it is a positive hindrance to our gaining a scientific idea of mental powers and processes. It contributes nothing but haze and fog, whose abundance and darkening character is just in proportion to the prominence accorded to the alleged faculty.

§ 26. There is, perhaps, a still more complete knowledge of mind which might be indicated by the term *comprehension.* I have reference to that knowledge which assumes to cognise the sources and ends of mental life, to give in full its *raison d'être.* Allied to this is the comprehension of nature which Dr. Hickok esteems the reason to accomplish; the two may be considered together. In the 'Rational Psychology' there is exhibited at length an explanation of this species of reason-comprehension. The author finds an *à priori* position for the reason in the Absolute which he determines to be a personality, whose elements are pure spontaneity, pure autonomy, and pure liberty. In such a personality creation is comprehended, including both the material universe and the finite personality. Here we have to deal with a mysticism which we are apt to find in all who seek to make philosophy subservient to religion. It is strikingly like that seen in the Neo-Platonists. The same thing is exemplified in the writings of Ancillon. The writings of Jacobi are so deeply tinged with this mysticism, and his efforts are so exclusively in the behalf of religion, that in the opinion of numerous historians he has forfeited his claim to the title of philosopher. In this connection also it is proper to note that Dr. Hickok has met with opposition among his theological brethren because of the pantheistic tendency of his philosophy; the 'Absolute' and 'Comprehension in an Absolute' have seemed to them highly objectionable phrases on this account. The principal objection which we urge against Dr. Hickok's view of the office of reason is the great difficulty we experience in getting any definite meaning at all out of this doctrine of nature comprehension in an Absolute by the reason. There may be happy mortals who have a capacity for certain states wherein they see by 'the mind's eye' things that ordinary men, from the grossness of their faculties, do not see. However this may be, I think it reasonable to suppose that from the inadequacy of language and the entire absence of such capacity in the majority of men, the nature of these visions must for ever remain unknown and unknowable to all but a few favoured individuals. Swedenborg, perhaps, had such a power; perhaps Jacob Boehme; perhaps Dr. Hickok has. Wretched as probably is the condition of us who cannot share these visions of beatitude, our abject misery has one alleviating aspect: it furnishes us with a competent apology for our total inability to enter into the spirit of Dr. Hickok's speculations. He can scarcely blame us, therefore, though he may pity us sincerely, if we class him with Plotinus, with Boehme, and with Fourier.[1] But what can we do if the more we analyse Dr. Hickok's theory, the more we spoil it? In order to have a science of anything we must have sharply-drawn distinctions, conformity to facts, and a clear arrangement of the matters of which the subject takes cognisance—in short, we must have something that will stand scrutiny. If Dr. Hickok's vessels are so fragile that when taken up for examination they break in pieces, they are of very little use. If he simply has drawn pictures which, on a steady gaze, fade away into thin air, they are of as little advantage as any other 'baseless fabric of a vision.' Yet we are again and again cautioned by Dr. Hickok to be on our guard how we handle the reason and reason-products. We must not seek them by the processes of the sense and the understanding. It will be 'wholly preposterous' if we set either of the latter to work to find that which is above and beyond their capacity. 'Geometry may as well be made dynamical, and invade the province of natural philosophy, as to make natural philosophy transcend nature and explore the region of the supernatural.'[2] If we are not very careful in our search we shall find ourselves hopelessly entangled in an 'interminable dialectic.' We must abjure all *reasoning* and employ only *the reason*. To be sure we are so prone to employ the understanding in such attempts that the tendency seems 'almost incorrigible'—a fact which might be considered evidence that we were on the right road at least in using such a faculty; but Dr. Hickok assures us that not only is it vain to employ the discursive power, but also claims that it is unnatural since we have a legitimate natural faculty designed for the purpose of seeing what is above nature. He does not explain how mankind so universally got into so bad a habit as thus to use the discursive faculty, nor does he make it very clear how a cure can be effected. It does seem a little strange, if man has another mental power specially made for, and peculiarly adapted to, a comprehension of nature, that it should be suffered to lie unused and to have its functions usurped by an inferior and more clumsy faculty; but Dr. Hickok would probably deem it sufficient to say to his opponents that there are more things in heaven and earth than are dreamed of in their philosophy, and that truth is stranger than fiction, which latter assertion I for one should endorse with a greater unction than ever before, if Dr. Hickok should at any time succeed in making out that these strange propositions are truth. And as to the other supposed remark—I think most people would be more willing to accept a reversed statement, and to believe that there are more things in Dr. Hickok's philosophy than are dreamed of in heaven or earth.

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[1] I do not have reference at all to the social views of the latter.

[2] *Rational Psychology*, p. 390.

§ 27. A comprehension of nature in an Absolute implies two principal items of knowledge; the one that we know an Absolute personality, the other that we know nature as created and sustained by and as existing for an Absolute Being—in other words, that the origin, support, and final cause of nature are found in such an absolute. I suppose the author maintains that both of these items are known by an intuitive reason. I take this as the most probable meaning to be attached to his words. It might be said that he designs to make out the Absolute as comprehending nature and we only knowing the Absolute; but he evidently has the prevailing idea that the human mind has something to do with the comprehending. Again, it is possible he had some such notion as that of Father Malebranche, who saw all things only through and in God; but if he had this idea in mind he did not bring it prominently into view. He seems to consider both that we know intuitively an Absolute Personality and that we know nature as having its origin, maintenance, and end in such a Being; this, so far as I am able to see, is what he means and all he means by reason-comprehension beyond a comprehension of one's own processes of knowing, which latter function has already been examined.

§ 28. It is to be observed *imprimis* that to know an Absolute Personality is not a matter of comprehension at all, but rather of insight. (I am using Dr. Hickok's terms, not my own.) Dr. Hickok, indeed, in one place shrinks from speaking of a comprehension of the Absolute. 'With no attempt to comprehend the Absolute himself, the human mind does comprehend universal nature in the Absolute and stays its own conscious dependence upon him.'[1] And in any contingency reason-comprehension of the Absolute is not different from knowledge of the Absolute, since according to Dr. Hickok we do not know the Absolute at all, save by the reason. And inasmuch as the second and third of the positions we have assigned to Dr. Hickok deal particularly with this knowledge of an Absolute, we may postpone further consideration of the same for a few paragraphs, satisfied that our author does not intend to aver that the human mind comprehends the Absolute, but rather that the Absolute comprehends; and that the finite mind comprehends finite nature in an Absolute. We do not comprehend the Absolute, but a comprehension of nature requires that the absolute be given as a *datum*; in other words, there must be a knowledge by the reason that there is an absolute Personality before it can be said to comprehend nature in an Absolute.

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[1] *Empirical Psychology*, p. 168.

§ 29. But if an Absolute be given, there are at least two serious difficulties in the way of a comprehension of nature by a reason. The one is the question how an intuitive faculty can comprehend in unity a multitude of items, past, present and future; the other is the equally troublesome query how a *comprehension* of nature can differ from a *connection*. Dr. Hickok shows how a knowledge of a nature of things is gained by the understanding, but nature involves alike what has been and what now is; and Dr. Hickok does not claim that we know the past intuitively. To say that an Absolute Being created nature, requires, if it be a statement supported by intuition, that the mind which sees should be present when creation takes place. Otherwise whatever strength the belief may have, it is a matter of inference. I have had occasion many times already to hold up the distinction between presentative and representative knowledge for the purpose of dispelling some of the illusions by which men have been deceived in regard to intuition. The same distinction may now again be referred to with equal confidence for a similar purpose. Without representative cognition we can assert nothing either in regard to the creation of nature or to its maintenance in being in time past. But all representative knowledge Dr. Hickok seems to place within the domain of the understanding. And to decide what is the final cause of nature requires just as much that we should have an acquaintance with nature as it has been, that we should be able to trace its progress, compare its different portions in different times and places that we may *infer*, not intuite what is its end and purpose. If we are in such exercises of mind, independent of the representative power, then we have a faculty to which there are no distinctions of past, present and future, to which time is wholly irrelevant. This is, however, no less than an attribute of the divine mind, and in claiming it we should be maintaining an identity of ourselves with God. If Dr. Hickok took such a ground, the charges of pantheism to which I have referred would appear to be well founded.

§ 30. Dr. Hickok wholly fails to establish and even definitely to state any radical difference between a *comprehension* and a *connection.* Every essay we make to explain comprehension, on his own statements infallibly carries us back to that which he has described as a connecting power. The only additional idea in the former beyond the latter is that of a whole embracing parts: but the very notion of a whole is meaningless without that of a connection of parts, and we cannot think of two things connected without regarding them as a whole so far forth as they are connected. *Whole* and *part* are relative terms each implying the other ; the whole comprehends the parts, and the parts are connected to form a whole. There is no comprehension without connection, and every act of connection gives a comprehension. A power to connect not only can make a comprehension but cannot connect at all without doing so. The entire distinction in kind made by Dr. Hickok between these two powers is arbitrary, artificial and baseless.

§ 31. We shall not longer delay over what I have assigned as the first of the arguments upon which Dr. Hickok rests the existence of the reason and its title to a separate place among mental faculties. Upon the second and third we shall not have occasion to dwell so long. Dr. Hickok shows that all attempts by discursive processes to reach an absolute above nature end in antinomies and contradictions, but that the mind is always seeking such an absolute, and never rests contented without answers to the questions which point to the satisfying of a rational curiosity to learn the why and the wherefore of being. The presence of such a mental energy is evidence to show that we have in our constitution a power to satisfy its promptings. Now it is to be remarked that the presence of a desire to know the origin and end of being, its source and support, is evidence simply of such a desire—evidence of the fact that we have added to our knowledge from time to time, and hence believe in the possibility of adding still further to that knowledge. There is, we believe, something more to know, there is a desire to know it, a movement of the will to attain it, the desire being undoubtedly based upon an idea of the possibility of attaining some sort of knowledge further in the direction we are moving. But how can our forced ignorance and perpetual rebellion against this condition be evidence of the possession of a faculty which, if we had it, would give us clear and indisputable knowledge on the very subjects toward which our desires tend? If we have a reason which teaches us intuitively certain truths we certainly should not be wearying ourselves in a search for them; we should *know* them beyond cavil. Therefore, the fact that there are questions at all in regard to the *whence* and the *whither* of nature is, so far as it goes, evidence against a faculty which gives us immediate and indisputable knowledge in regard thereto.

§ 32. That the exercise of reasoning upon the ultimate origin and nature of things results in antinomies is true enough, and Dr. Hickok has very well demonstrated the uselessness of attempts to conceive an absolute. But before he can make such a demonstration of avail to prove the existence of his faculty of reason, he must show the conclusion that the human mind never can know an Unconditioned to be less worthy of reception than the supposition of an unanalysable faculty for seeing that which is absolved from conditions. At any rate, he cannot with any sort of propriety make the fact that there *is* an Unconditioned evidential of the existence of a faculty of reason; for only by showing the status of the latter in the mind can the former be established as a matter of our cognition. Yet we are entitled to more than a suspicion that Dr. Hickok cheats us in just this way. In the 'Empirical Psychology,' wherein he gives an exposition of the various faculties of the mind 'as they reveal themselves through an actual experience in consciousness,' he affirms among the characteristics of the reason that it knows an Absolute Creator; this is one of the things which define and mark reason; our knowledge of an Absolute Creator is proof that there is a reason. But when, in the 'Rational Psychology,' the author comes to the task of proving that we do have a cognition of an Absolute, in what way does he get about it? He urges that by no processes of an understanding can man know an Absolute, but informs us that He can be '*rationally apprehended!*' An Absolute is to us because the reason sees that He is, apprehends Him (though comprehension, not apprehension, is usually with the author an attribute of reason); our knowledge of an Absolute is thus made to rest upon the existence of the reason! Profounder philosophers than Dr. Hickok, or even 'the profound Jacobi,' have seen the difficulties in the way of an attempted cognition of the Unconditioned; but, more wisely than Dr. Hickok, they have accepted these ineradicable obstacles as evidence of the truth that all human knowledge is of the relative, and have refrained from assuming a knowledge of the super-relative, and proving it by positing a faculty, a chief warrant for whose existence is the very assumption which it seeks to substantiate.

§ 33. Allowing, if any one please, that 'there is a spontaneous and perpetual demand for the recognition of an Absolute,' at most it can show only a strong *belief* in an Absolute. This, however, is a very different thing from an intuitive knowledge; we may believe in God, though not yet seeing 'face to face.' Understanding the relations of belief and knowledge, we may speak of a cognition of a Creator as an item of knowledge; yet it is not intuitive but inferential knowledge—in Dr. Hickok's view, understanding-knowledge.

§ 34. The fourth position we have ascribed to Dr. Hickok is that of arguing for a reason from the fact of universal and necessary cognitions which he claims are intuitive. Space, time, substance, cause, are learned and known by the reason intuitively and not discursively. While we can conjoin phenomena in space and time, connect them in a notional substance or cause, space and time, substance and cause are themselves known only by reason; they are not generalisations from experience, but are conditional for experience. As before declared, it is not my purpose here to meddle with questions of the origin and *à priori* or experiential nature of knowledge. All we are now concerned with is the mediate or immediate character of cognitions, and to this we shall, as far as practicable, confine ourselves.

All will concede that we have certain cognitions, which we are accustomed to symbolise by the terms *space*, *time*, *substance*, *cause*. If, then, the question were whether or not we know these cognitions intuitively, it would be soon answered. In this sense all our knowledge is intuitive. In such a case there could be no possible difference between a sense-intuition and a reason-intuition. Whether we call them products of sense or reason, they would be the same, and after having established a faculty called the sense, for apprehending ideas in consciousness, there would be no call for another faculty like that of reason. Dr. Hickok, however, claims more for space and time, substance and cause. He says that by the cognitions we know *things* which they represent as realities external to us. He would doubtless allow that the *ideas* are not time, space, substance, and cause; but are ideas *of* time and space, substance and cause. Now if all ideas of time and space, substance and cause were removed, would any one contend that we should know what those ideas are ideas *of*? Then what escape is there from the conclusion that we know time, space, substance, and cause *by* and *through* certain cognitions? that is, through the media of those cognitions, that is, mediately; hence, not immediately, hence not intuitively? Otherwise the term intuition is not applicable properly to presentative knowledge, and we have no right to call our perception of a light, a weight, or an odour, an intuition. But Dr. Hickok and all the intuitive philosophers, so far as I am aware, sanction the application of the description *intuitive* to that knowledge which is presentative.

I submit that all meaning which attaches itself to the term *intuition* as indicating knowledge beyond that of sensation and ideal presentation is derived from analogies of the latter. Says Sir William Hamilton, 'When we wish to express in the strongest terms the most complete evidence which can be set before the mind, we compare it to the light of noon-day.'[1] When Dr. Hickok desires to put in the plainest language his meaning in explaining the kind of knowledge which is attained by the reason, he says it is gained by 'the mind's *eye*.' *Seeing* is *intuition*; it is immediate. So also when I have an idea I know that I have it immediately. But if I know anything which is not in my mind, I know it in a different way, a radically different way; in a strict sense I do not *know* it at all, I believe in it, I infer it. We say that it is known mediately. Therefore if we make any distinctions in knowledge, we should make them here; and refusing to make and abide by this one renders useless all efforts to classify and distinguish cognitions. If then space and time, substance and cause are not considered as ideas merely, but as something signified, symbolised, or known by ideas, they are known mediately and not intuitively. They are not known by a reason, if that be a faculty of intuitive knowing.

§ 35. Dr. Hickok distinguishes sometimes between *intuition* and *insight*. He says, 'All perception is an immediate beholding, inasmuch as the object is put face to face before the mind in the light of consciousness. Perception is thus *intuition* in the sense of immediate view in consciousness. There is another meaning of intuition which is a looking into things themselves, and is more properly insight, but which is for the reason and not the sense, and is distinguished as *rational* intuition.'[1] Now there is no essential difference in their etymological meaning between the words *intuition* and *insight*. Possibly the former might be said to be a *looking upon* and the latter a *looking into*. But how is a looking into, a looking beyond the surface accomplished? Only by the removal of one surface and the developing of another; the inside becomes outside; that which was unseen becomes seen, or else from what is seen an inference is drawn as to the existence and nature of an unseen. Insight then must still either be a looking upon that which is present as phenomenon, or an inference from that which is presented of something not presented. In the former case it is intuition, and according to Dr. Hickok an operation of the sense; in the latter it is mediate knowledge, attained by the understanding.

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[1] Note on Stewart's *Remarks on Intuition* in Part II. Sub-div. I. Chap. I. Sec. 1 of Stewart's *Works* edited by Hamilton.

Thus to make space and time, substance and cause, intuitions or attained by an intuitive faculty, we must locate them solely in the mind; they must be known as ideas or sensations and only thus. But even if this view were correct (which few would allow), there would still be a cognition of something more ultimate; there would still be in thought a noumenon behind these—a substance of a substance, a cause of a cause, a somewhat which the mind supplies or assumes, but which it does not see. Dr. Hickok recognises this fact, but thinks he avoids the interminable succession and sub-position by the assumption of a faculty of reason which cuts short the process. But we have seen that the moment he attempts to define, explain, or prove this faculty he is led back into the chains from which he fancies he has escaped. He can indeed make the assumption and claim that it is above proof; to this mode of getting over the difficulty we shall recur; it is enough to remark here that it does not require a special and peculiar faculty to make assumptions which are not proved.

§ 36. Very strikingly do the foregoing considerations apply to an assumed knowledge of an Absolute Person. We do not *see* such a Person, even by 'the mind's eye.' The Absolute is not an idea in our minds, else He would not be absolute; if we can know an absolute at all we must know Him *through* an idea, hence not by any intuition. Moreover, the very conception of an Absolute is self-contradictory; that this contradiction is not helped by Dr.

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[1] *Empirical Psychology*, p. 124.

Hickok's reason is seen in that if we essay to use the latter we make the Absolute a limited just as surely as if we were using the much condemned understanding. Dr. Hickok's endeavours to make God a subject of science are no less suicidal than have been all the attempts of his predecessors.

§ 37. Again, if there be any need of pursuing this topic farther, the admitted fact of the universality of reason-cognitions militates against the claim that they are attained by an intuitive faculty. If it be an essential feature of a reason-cognition that it be known as universal, how can it be made to appear so without representation and comparison? I must know that I have always had it, and that all I have heard of have had it; but this knowledge is attained only by understanding processes. We are obliged, therefore, to apply the understanding to attain a reason cognition, the very thing which, according to Dr. Hickok, the understanding is wholly incompetent to do. Hence we have no reason-cognitions at all, or, if we have, they are not universal or known to be universal. It may be said, perhaps, that they are universal because they are necessary—that a necessary truth known to be necessary must needs be universal. If this ground be assumed, then the universality of a truth or cognition is a deduction from its necessity; but deduction is a very prominent office of the understanding. If the appeal be taken finally to the criterion of necessity, when we ask the meaning of necessity as applied to a truth, we shall probably be told that a necessary truth is one of which we cannot conceive the contrary, make what effort we will; our attempts only return upon themselves. Now there is a large class of truths represented, for instance, by *The human mind cannot know the Unconditioned*, of which the contrary, Dr. Hickok tells his readers over and over again, is wholly inconceivable to the understanding. The understanding never can leap the boundaries of nature, never can escape from its prison-house. These truths then are to the understanding necessarily true. We have therefore upon the author's own showing the fact that necessary truths are apprehended both by the reason and by the understanding.

§ 38. Once more, it is extremely difficult to appreciate why, if the mind has an *à priori* faculty for knowing space and time intuitively, an *à priori* position for its exercise, and the cognitions themselves, should be attainable only by a process of abstraction. Yet this is the method of Dr. Hickok. After taking away all else there is left a cognition of pure space and time which experience cannot give, since it is conditional for all experience. By an understanding process we arrive at reason-cognitions! The author might say that reason-cognitions are always found with sense and understanding cognitions, and that it is necessary to clear away these latter in order to separate and make distinct the former. But why should there be any such requirement, if, as we are called upon to suppose, the reason is a faculty of sun-clear knowledge, so plain and evident that it never can be mistaken for anything else, so directly and immediately attained that nothing can be more quickly or infallibly reached? Is it not obviously proper and correct to say, when we acquire a cognition by an abstraction, that such a cognition is itself prescinded, is itself an abstraction? It is evidently enough then an understanding cognition and gained by the understanding; and the fact that by abstraction *everything* cannot be taken away, but space and time remain, is evidence not that there is thus known space and time as independent of experience, but simply that they are the common elements of all experience.

§ 39. The fifth class in our enumeration embraces Dr. Hickok's general method. The statement of this method carries with it a possible argument for the existence of the reason. Dr. Hickok holds that there is no science without a determined correlation between an *à priori* idea and facts. We have a faculty for seeing *à priori* how things are possible, how, if at all, they must be; then taking the idea thus attained as an hypothesis, it is our province to examine facts to see if they fit into the mould provided for them; if their objective law corresponds with the subjective idea, we have scientific knowledge. For instance, with regard to nature we can form independently of experience an idea of how a nature of things is possible; we do not know thus that there is such a universe, but if there is we know it must be so and so; we then resort to experience, and find that the facts of experience accord with our *à priori* idea, that there actually is such a universe of things. We demonstrate thereby (if we need anything more to make it evident) that our *à priori* cognition is true; and that it is the product of an intuitive faculty is plain, because we reached, without appealing to experience, a truth which even experience afterwards proves.

Does it need much argument to show that Dr. Hickok's idea *à priori* attained is itself not independent of experience, but is determined by experience? Does Dr. Hickok suppose that without experience any such idea could be acquired at all? Though he tells us he is proceeding to form the idea anterior to experience, nevertheless is it not experience that is correcting and indeed determining the idea at every step? Does the author mean to claim that we should ever have been able to draw out of our minds *à priori* an idea of how the worlds came into their present places, and by what forces and in what manner they move and maintain themselves? Could the human mind have evolved a nebular or a Copernican theory without careful observation and experiment? We can form conceptions of the operations of 'antagonist' and 'diremptive' forces, but is not our conception itself determined by the probabilities which observation has suggested? Are those cognitions anything other than hypotheses rendered more or less probable and plausible according to the measure of experience? And is Dr. Hickok's verification by finding the objective law in the facts anything more than the verification of an hypothesis? I think the ordinary common sense of mankind would not long hesitate over the answers to these questions, nor do I imagine that the best philosophical sense of the world is any more in the author's favour. Dr. Hickok, without giving a single intelligent reason therefor save the exigencies of his own system, assumes that a long, connected scheme of the universe, which philosophers natural and mental have worked out to its present perfection only after years and centuries of human life, is seen in the natural light of an intuitive faculty—a supposition so absurd as to need no exposure of its baselessness. Moreover having got this *à priori* idea, it does not make science after all, but in order to establish a scientific system recourse must be had to experience, and we must consider the idea as an hypothesis and prove it! Of what possible use, then, is the *à priori* idea for any purpose whatever?

§ 40. Another difficulty with this *à priori* idea of a nature of things is that, while it may be seen how in one sense, irrespective of fact, the scheme of nature which Dr. Hickok puts forth is a possible one, it is not to be readily apprehended *à priori* how it is exclusive. Grant that we have an idea of nature, intuitively reached and held independently of experience; suppose that we know nothing as to its truth as a matter of fact—we can allow a nature of things like this to be possible, but we do not find it easy to understand that so, if at all, nature must necessarily be. We can conceive other schemes of nature to be possible; why is one any more necessary than the other? We can conceive our solar system with no asteroids; this is an idea of a possible system: we can also conceive our solar system with asteroids; this is equally possible. Are both these conceptions necessary; and if not, why is one any more a reason-intuition than the other? Surely not everything possible is also necessary. It is possible that there are planets beyond Neptune; but who would dare claim it as a necessary truth, or even hazard a strong statement of its probability? It is possible to conceive of men having six fingers on each hand; it is not therefore necessary that they should have that number, nor is it even true that they do. Our imaginations may construct ideas and trains of ideas, ideal systems, indeed, of a very elaborate character. Dr. Hickok would be far from asking us to believe that all of these are intuitions of the reason. In what manner, then, are we to distinguish reason-schemes from imagination-schemes? How can we determine what are true and what fictitious and untrue? I am not able to discover that Dr. Hickok shows us any other way than by a resort to observation and experiment. We thereby find that any idea of nature is more important than others, and has a tendency to exclude others just in proportion as it is confirmed by experience. It *must* be true if it universally *is* true; its necessity varies according to its universality in experience. Consequently, if an appeal to fact is necessary in order to establish the scientific truth of any such cognition (as Dr. Hickok himself seems to admit), the experiential test, not the *à priori* intuition, is ultimate, and the boasted faculty of reason, which sees truth without the aid of experience, is forced to come humbly to experience to ask whether what it has is truth or untruth.

§ 41. If any further argument were required to make evident the utter inadequacy of such a theory in regard to reason-knowledge as that which Dr. Hickok so gravely propounds, one would only need to follow him along the whole course of his *à priori* speculations and note what he makes the 'mind's eye' see. There might be some show of plausibility to the doctrine that space and time are known intuitively; there might even seem to be a case made out *primâ faciè* in favour of Dr. Hickok's *à priori* cosmology, so far as it 'attains unto' the more general laws of the universe. It might have been supposed also that there was some ground for argument in favour of an *à priori* cognition of a Creator, since some eminent men of the past strenuously and with more or less apparent success have so maintained. But when Dr. Hickok in unmistakable language avers that we know by reason the doctrine of the Trinity to be true, we certainly have cause to feel that we might as well close the book and consign the author to the limbo of those who have made philosophy a by-word and a reproach by their empty and foundationless vagaries. And what is more, the author in a later work, by the assistance of this most convenient faculty, proves the fall of man and the whole scheme of Christian redemption![1] Are we to expect another volume from this indefatigable apostle of reason in which he will see by the 'mind's eye' the truth of the Thirty-nine Articles of the English Church or the Westminster Catechism? Looking at the matter from a philosophical stand-point, I do not believe the history of philosophy shows a more complete collapse of all philosophical order, method, consistency, and character in the case of one who has aimed at developing a system. Beside this the crude speculations of the Ionics, the Eleatics, and the Pythagoreans were accuracy and truth itself! In comparison with Dr. Hickok, Schelling and Hegel were moderate in their demands upon our credulity; they were sober plodders in the paths of philosophy, whose steps never went astray, and their conclusions were scientific and substantial! Not Auguste Comte, in his attempt to found a new religion, ever did more violence to philosophy and truth than does this expounder of a 'rationalism' which assumes to build the superstructure of knowledge upon a foundation that would admit of a despotism of individual or sectarian sciolism as fatal to all high intellectual advancement as was the tyranny of the Vatican to civil and religious progress. If the 'mind's eye' will reveal to any one what his prejudice makes him desirous of seeing, and if success crowns every effort of the devotee to claim the authority of an infallible reason for any dogma which he would promulgate, the world must soon be reduced to a state of intellectual chaos; and ignorance and superstition would brood over its face.

§ 42. It would be farthest from my purpose to make denunciation and ridicule take the place of argument in treating of anybody's philosophy. I should not have indulged in the remarks expressive of feeling which have been thus far made, had I not supposed the considerations adduced to have been sufficient to show that Dr. Hickok's philosophy of reason cannot hold the standing it claims for itself, and that it is destitute of firm foundations to support it as a system of scientific truth. It can hardly be expected of us, within the limits of this chapter, to go into a very minute criticism of the six or seven volumes in which Dr. Hickok's philosophy is contained. In the course of our examination thus far we have seen the insuperable difficulties in the way of receiving the doctrine of the reason, which is the author's characteristic merit or demerit. Yet, though we have taken up his most important canons and arguments, there remain a few more which we shall be obliged to notice in order to avoid the possible charge of having slurred over or omitted something of value. I think, however, we need not dwell long upon the proof of a reason from the use of symbols, and from the comprehension of an idea or a purpose in a machine. A national flag, or a class emblem, is significant of the various associations which appertain to the thought of the nation or class symbolised. A flag recalls the great deeds wrought under it, brings up the memories of triumphs won in battle on land or sea, inspires with the thought of the advantages which a governmental order brings to a people, awakens all sorts of patriotic emotions consequent upon memories of the past, blessings of the present, and resultant hopes for the future. Beyond this it has no intelligible meaning. So a class badge, when seen, reproduces in thought the doings, principles, and purposes of the society, the pleasures which have been experienced in its membership, or the works, beneficent or otherwise, which have been done under the society's auspices. Religious ceremonies are symbolical of religious emotions, of our beliefs in a God, of our determination to lead worthy lives or lives of devotion to the service of a Supreme Being, of our hopes and fears of a future life. The cross recalls the life and sufferings of Jesus, the promises of blessedness to those who believe in His name, and all the associations of the religious system depending on Christ. Language stands for something recalled by it, and its meaning is derived wholly from the reproduced associations. As a means of communication—its primary office—it is no less dependent upon association and representation than as a means of recording. In all cases of the use of symbols, their symbolical signification is in the represented associations attached thereto. The processes concerned are representation and association, both embraced under Dr. Hickok's faculty of the understanding.

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[1] *Humanity Immortal.*

§ 43. No more is there necessity for an intuitive reason, to gain an 'insight' into the controlling principles of a machine. It is sometimes a matter requiring careful study—analysis, comparison, recollection, generalisation and reasoning, to enable us to see what is the idea and purpose of a piece of mechanism. When, however, these can be perceived instantaneously, it is because of our previously acquired knowledge stored up in our minds that we are enabled to comprehend, not because of any intuitive faculty of seeing into things. A man looking at a machine new to him brings his past experience to bear, and unless (or until) he can do so he has no more knowledge on the subject than the veriest infant.

§ 44. That we have ideals of the Beautiful, the True, and the Good, has, since the time of Plato, been held by one school of philosophy as proof of *à priori* knowledge in the mind; and from the existence of that confusion which has generally prevailed in respect to the meaning of intuition, the same class of philosophers in considerable part has regarded these ideals as evidence of an intuitive faculty. As against the *à priori* philosophers on the question of the nature of these cognitions, a complete refutation is only exhibited in the general study of the associating processes of the mind and in a particular examination into the origin of all cognition. But as opposed to Dr. Hickok's faculty of reason, the same considerations are powerful which were referred to when the cognitions of space and time were before us. Either the Beautiful, the True, and the Good are wholly in the mind or not. According to Dr. Hickok they have an external reality; hence we have something external cognised through the *medium* of certain ideas, that is, cognised mediately and not intuitively. Dr. Hickok will not admit that the Beautiful, etc., are sensations or derived from sensations. He cannot then avail himself of what intuitive knowledge of external reality a sensation may on any theory be supposed to convey. He shuts himself up deliberately to the conclusion that we know existences outside of the mind by means of and through the medium of ideas in the mind. For if we were to say we know the outside existences immediately, what kind of knowledge would that be by which the ideas are cognised? Dr. Hickok does not hold that we know anything more directly than the ideas our minds have. If any distinction at all is made therefore between a knowledge of outside existences and a knowledge of ideas as such, the office of the reason is taken away, because in the cognisance of objects as outside the mind an inferior and mediate knowledge is introduced: and if there be no distinction, then, since ideas are all apprehended by the sense, the difference assumed between the sense and the reason is obliterated.

§ 45. Thus equally with Time, Space, Substance, Cause, the Beautiful, also the True and the Good must either be sensations or the derivatives of sensations by processes of generalisation and integration; or ideas simply having no connection with sensations at all and carrying with them no knowledge of an external reality; or finally they must be ideas independent of sensation, through which realities are cognised. Whichever one of these suppositions be adopted, Dr. Hickok's sense and understanding afford a complete explanation, and furnish for the cognitions appropriate places in a classification. The reason, as a faculty of intuitive knowledge, may be entirely dispensed with.

§ 46. These difficulties will always be in the way of the reception of any doctrine whatever of an intuitive cognition of the Beautiful, the True, and the Good. We can only substantiate such a knowledge by ignoring or repudiating the distinction between mediate and immediate cognition. And if we do this in the case of our ideals, there is no possible reason why we should not do it in the case of our recollections, and say that we know intuitively the whole train of events which compose our past experience. If carried out, this course would result in the asseveration that everything known is cognised by intuition, and the word *intuition* would come to convey precisely the same meaning as the term *experience* now does; we can change the terminology but not the fact. Nothing, however, would be gained by the resolution for anybody, not even for the intuitionalists. We should be forced somewhere or other to introduce a distinction between a present consciousness and a represented one; and this distinction consistently preserved takes away all propriety from the use of a term to indicate the latter which is applied expressly to contradistinguish it from the former.

§ 47. The same line of argument is decisive against the employment of any intuitional reason to construct and hold up before the mind archetypes, patterns, standards of perfection in any direction, or of any kind. If these stand for anything extrinsic to the mind, there is no room for the exercise of an intuitive faculty to see the external which is not manifested through sensation. But if, as I understand Dr. Hickok to claim, they arise in and are solely of the mind, we can be free to admit that as ideas they are intuitively apprehended. He would be entirely correct in the use of the word; and our only contention with him would be over the derivation of these cognitions. He would claim them to be *à priori* in their origin; we should maintain that they are experiential. Discussion on this point we must postpone; but in any event, irrespective of their origin, if they are nothing more than present ideas without external relations, why is not the sense competent to know them as such? Must they not become known by a distinguishing and defining operation? And is there anything more unless some representative element be admitted? If the latter be allowed, is not that accounted for by the understanding? I see no escape on Dr. Hickok's own principles from answers to these interrogations which are adverse to his faculty of reason.

§ 48. That the mind has a 'self-activity, autonomy, and liberty' is not an argument for the existence of any faculty of cognition; nor is it even a statement of such a faculty. That the mind may *know* that it has self-activity, or any other characteristic, as has been shown, does not require an intuitive reason. The knowledge of the mind's attributes and faculties is obtained by objectifying mind and studying it in the same way and by the use of the same powers as we use in studying anything else. The spontaneity of mind's operations is discoverable, if at all, by analysis of the mind's capacities accomplished in the same manner as any other analysis. By this we discover certain voluntary and active powers, but they are not powers of cognition. Whatever can be made of a *play impulse*, it is not evincive of a faculty of intuitive knowing: play is not cognition, but action, and an impulse relates to will and not to intellect. Dr. Hickok says the sentient nature works for wages; the rational 'plays with nature' and 'in the interest of its own cheerfulness.'[1]

Probably his idea is this: that by the presence of a higher faculty of reason all the susceptibilities are enlarged and the whole character raised into a higher sphere than it otherwise would fill. But surely Dr. Hickok would not deny reason to the most debased and wicked of mortals, since reason is with him the mark which distinguishes man from the brutes, and he claims there is a wider gulf between the lowest man and the most intelligent of the brutes than exists between any two species of the lower animal kingdom and between any two species of the genus *homo*. And so far as a play impulse or sportive rationality is concerned, evidence from such characteristics might be made to prove more than the author would be willing to allow. The corner loafer cannot be made 'to work for wages,' but spends his lazy existence basking in the sun on the warm side of buildings solely 'in the interest of' his 'own cheerfulness.' Moreover, the play impulse is seen illustrated in the young of all animals. Dr. Hickok would not call the former and his acts or his inaction highly creditable to humanity or regard them as evidence of a superior nature, though the lounger has a reason; nor would he concede that the young brutes have that faculty, though the play impulse be proof of such a power. It would be well for Dr. Hickok to be more consistent. But even if he could deduce an independent and sufficient argument from a supposed elevation of the active and moral powers in consequence of a reason, he would accomplish nothing by it unless he exhibited some probabilities that in the absence of such a faculty there would be a lower degree of character. Since we have no human beings to look upon in whom the reason is not found, we have no data from which to judge whether this would be the case or not. We do not know but the sense and the understanding, if exercised alone, might produce exactly as high a character; or, on the other hand, we do not know but that whatever superiority of character man has may come as much from the exercise of these two faculties as from the reason, since the three are never in fact found separate. All that Dr. Hickok can do is to appeal to the difference between man and the brutes, and assume that the distinction is in the *kind* of knowing. Of the flimsy character of this assumption I have already spoken. And even if it were proved, still in order to make Dr. Hickok's argument conclusive, it would be necessary to have some *man* without the faculty of reason in order to compare him with men who have reason; for we can hardly be called upon to suppose that the *sole* distinction between man and the brutes is in the kind of cognising powers. Differences of bodily structure and constitution might be found to make up no inconsiderable amount of general difference; and since with Dr. Hickok species are distinct in kind and never can pass into each other, among the lower animals themselves there would seem to be as wide differences as between them and mankind. Are these *degrees* of differences in *kind*?

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[1] *Rational Psychology*, p. 170 *et seq.*

§ 49. Lastly, we come to a position to which intuitionalists of the stamp of Dr. Hickok are very prone to retreat when hard pressed. Sometimes they say (and Dr. Hickok forms no exception) that the consciousness of the working of such a faculty as Dr. Hickok's reason is sufficient evidence of its existence; in other words, that it is an ultimate fact not susceptible of proof. This stand might be taken with the confidence that it would be a stronghold against attack, if the reason be, as they assert, an ultimate fact. But in order to determine this we must first know what is meant by reason. We cannot make a predication of this subject unless we have the subject distinctly and definitely in mind. Now, as has been seen, when we attempt to examine this reason, it flies in pieces; the moment we essay to define it, to ascertain what the term means, it loses all distinctive character. Assuredly, when that which is under consideration vanishes from before our eyes or is resolved into something else, it is not an ultimate fact, perhaps not a fact at all. To call reason-knowledge 'perfect, instant, comprehensive, knowing at a glance and also incessant knowing as a constant gaze,' is not descriptive of reason-knowledge more than it is of any clear knowledge which continues before the mind; obviously the description derives all its force from analogies of sense-perception. Dr. Hickok says, 'We may refer to any one instance of clear and quiet conviction and a satisfactory resting in the knowing, and we shall ever find that this satisfied conviction is in the insight of a controlling connection by which the manifold is seized comprehensively in complete individuality.'[1] Whatever this may mean, how it proves a consciousness of a reason or establishes its existence is difficult to understand. Such expressions have very little scientific import; and the import this has is only to the effect that we do have clear convictions with which the mind is satisfied, a fact which nobody ever disputed. The rest of the phrase is hyperbolical and mystical; it may be construed into an averment of the author's reason-cognition, though the word *connection* is suggestive of Dr. Hickok's understanding-faculty. But whatever may be the meaning of these statements, these are only reiterations of Dr. Hickok's theory, not proofs of it, nor does the context supply any such proofs. How, I should be glad to know, does a 'clear and quiet conviction' evidence an intuitive reason? Dr. Hickok does not explain, and with my humble abilities and faculties I am unable to discover.

§ 50. If Dr. Hickok and his school hold that the existence of a reason is a fact above proof, and that the faculty itself is beyond analysis, provided they are consistent in their views and abide by them, it must be confessed that they have at last the advantage of their opponents. They can say to the latter, 'Your arguments are irrelevant, and whatever you prove it is of no consequence; nothing you can say will have the slightest effect upon us. We *see*, we do not need to argue or to prove; you are using the delusive processes of the logical understanding; we discard these and simply *look*, exercising our divine faculty of reason. If you do not believe us, you are *alterum genus*, and what you say and believe is 'a matter of no further concern to us.'[1] This style of thought may be very solacing to Dr. Hickok and those who follow him, but it will not be likely to make many converts to their philosophy. I once heard a great preacher say that if we encounter a man sitting on a dry rock and saying he is in the garden of God, we should 'give him a hoist.' But it is discouraging to reflect that the more these people are hoisted the more persistent they are in their folly; and we may be forced to the conclusion that about all there is to be done is to pass by on the other side, leaving them to enjoy their inspiring reason-intuitions to the fullest extent possible.

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[1] *Creator and Creation*, p. 86.

§ 51. In concluding these remarks upon the views of philosophers of the school of Jacobi (for so it is on the whole proper to denominate them, though Jacobi developed no system, and is not usually cited as the progenitor of a line of thinkers), I am happy to quote with my most cordial approbation and endorsement the following words of Dr. McCosh:—

'It is of all things the most preposterous in certain speculators to set out with the idea of the infinite without a previous induction of its nature, and thence proceed consecutively or deductively to draw out a body of philosophy or theology. Such men have lost themselves in attempting to voyage an "unreal, vast, unbounded deep of horrible confusion"; and yet they would seek to pilot others, only to conduct them into darker gloom and more inextricable straits, and in the end bottomless abysses. . . . He who passes these bounds is talking without a meaning; he who would start with the notion of the absolute, and thence construct a system embracing God, the world, and man, will without fail land himself in helpless and hopeless contradictions—the necessary consequent and the appropriate punishment of his folly and presumption.'[2]

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[1] *Empirical Psychology*, p. 68

[2] *Intuitions*, p. 229.

§ 52. If any one, by the exigencies of a school or college curriculum or by other interest, is constrained to spend time over Dr. Hickok's works, there is no better method of clearing and purifying his mind than to read or re-peruse Locke's Essay. It is ever true, in the words of William Molyneux, that Locke is incomparable, in that he 'hath rectified more received mistakes and delivered more profound truths . . . for the direction of man's mind in the prosecution of knowledge . . . than are to be met with in all the volumes of the ancients. He has clearly overthrown all those metaphysical whimsies which infected men's brains with a spice of madness, whereby they feigned a knowledge where they had none, by making a noise with sounds without clear and distinct significations.'[1]

CHAPTER LVIII.

NECESSARY TRUTH.

§ 1. I SUPPOSE I owe the reader an apology for attempting an extended discussion of necessary truths. Abler pens than mine have treated the subject fully, and in what has preceded in this work all has been said that is needed in the way of exposition. Nevertheless, I am unwilling to close our examination of cognitive integrations without a somewhat extended review of the chief questions that have been raised respecting universal and necessary ideas, both as regards their nature and their origin. So obstinate has been the error, and so widespread the misunderstanding attached to these portions of knowledge, that labour is still needed to expose new disguises of the fallacies in connection therewith which are all the time appearing, and to beat back the constantly recurring (though greatly weakened) attacks of the old forms of a false philosophy. It may well seem strange, when by far the greatest portion of our knowledge is and always has been conceded to come from experience, and when all the attempts that have been made from the time of Thales to the present have failed to satisfy the world of any other basis, that men should still be seeking to find such a foundation for science, and that there should be need of correcting their mistake; but since even some of the learned are persisting in such a search, and it is necessary to refute their arguments and to show again and again the futility of their endeavours, contributions to the polemics of this topic may not be amiss at the present time.

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[1] English Men of Letters Series: *Locke*, by Leslie Stephen.

§ 2. It will not be deemed supererogatory to ascertain in the beginning of the discussion what have been the characteristics of the class of truths now under review, as entertained by the *à priori* philosophers. I presume no one will object to the statements of Dr. William Whewell, who is probably the most eminent of the modern defenders of the so-called intuitional theory, as furnishing a fair statement of the position of those maintaining the existence of knowledge independent of experience. Let us then see what Dr. Whewell says as to the nature of these postulates:—

'Most persons are familiar with the distinction of *necessary* and *contingent* truths. The former kind are truths which cannot but be true; as that 19 and 11 make 30; that parallelograms upon the same base and between the same parallels are equal; that all the angles in the same segment of a circle are equal. The latter are truths which *it happens* (*contingit*) are true; but which for anything which we can see might have been otherwise; as that a lunar month contains thirty days, or that the stars revolve in circles round the pole. The latter kind of truths are learnt by experience, and hence we may call them *Truths of Experience*, or, for the sake of convenience, *Experiential* Truths, in contrast with necessary Truths.

'Geometrical propositions are the most manifest examples of Necessary Truths. All persons who have read and understood the elements of geometry know that the propositions above stated . . . are necessarily true; not only that they *are* true, but they *must be* true. The meaning of the terms being understood and the proof being gone through, the truth of the propositions must be assented to. We learn these propositions to be true by demonstrations deduced from definitions and axioms; and when we have thus learnt them we see that they could not be otherwise. The latter kind men could never have discovered to be true without looking at them; and having so discovered them, still no one will pretend to say that they might not have been otherwise. For aught we can see, the astronomical truths which express the motions and periods of the sun, moon, and stars might have been otherwise. If we had been placéd in another part of the solar system, our experiential truths respecting days, years, and the motions of the heavenly bodies would have been other than they are, as we know from astronomy itself. . . . Necessary Truths are derived from our own Thoughts; Experiential truths are derived from our observation of Things about us.[1] . . . As I have already said, one mode in which we may express the difference of necessary truths and truths of experience is that necessary truths are those of which we cannot distinctly conceive the contrary. We can very readily conceive the contrary of experiential truths. We can conceive the stars moving about the pole or across the sky in any kind of curves with any velocities. We can conceive the moon always appearing during the whole month as a luminous disk, as she might do if her light were inherent and not borrowed. But we cannot conceive one of the parallelograms on the same base and between the same parallels larger than the other; for we find that, if we attempt to do this, when we separate the parallelograms into parts, we have to conceive one triangle larger than another, both having all their parts equal; which we cannot conceive at all, if we conceive the triangle distinctly. We make this impossibility more clear by conceiving the triangles to be placed so that two sides of the one coincide with two sides of the other; and it is then seen that in order to conceive the triangles unequal, we must conceive the two bases which have the same extremities both ways to be different lines, though both straight lines. This it is impossible to conceive; we assent to the impossibility as an axiom when it is expressed by saying that two straight lines cannot inclose a space; and thus we cannot distinctly conceive the contrary of the proposition just mentioned respecting parallelograms.

'But it is necessary in applying this distinction to bear in mind the terms of it: that we cannot *distinctly* conceive the contrary of a necessary truth. For in a certain loose, indistinct way persons conceive the contrary of necessary geometrical truths when they erroneously conceive false propositions to be true. . . . Such a mode of conceiving the opposite of a geometrical truth forms no exception to the assertion that this opposite cannot be distinctly conceived.[2]

'In like manner, the indistinct conceptions of children and of rude savages do not invalidate the distinction of necessary and experiential truths. Children and savages make mistakes even with regard to numbers, and might easily happen to assert that 27 and 38 are equal to 63 or 64. But such mistakes cannot make arithmetical truths cease to be necessary truths. When any person conceives these numbers and their addition distinctly, by resolving them into parts, or in any other way, he says that their sum is necessarily 65. . . . Necessary truths must be *universal* truths. If any property belong to a right-angled triangle *necessarily*, it must belong to *all* right-angled triangles.'

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[1] *Philosophy of the Inductive Sciences*, Part I. Bk. I. Chap. I. Sec. 2.

[2] *Philosophy of the Inductive Sciences* Part I. Bk. I. Chap. III.

§ 3. According to Dr. Whewell, therefore, the distinctive characteristics of necessary truths are their necessity and universality; to these criteria some would possibly add that of inconceivability of the opposite; the latter, however, is made by the author an explanation of the attribute of necessity. Dr. McCosh[1] gives three decisive tests of 'intuitive truth,' namely, self-evidence, necessity, and catholicity. But self-evidence means one of two things: either it signifies the property of being understood instantaneously without explanation, and assented to as soon as the expression is thought of, seen or read; or a self-evident truth must be one which forces the mind to yield its approval, *when once the statement is comprehended*, without need of reasoning or extrinsic evidence. I cannot suppose Dr. McCosh contemplated the former as being the true explanation of this term; for he maintains that in order to be sure a truth is self-evident we must 'devote our minds earnestly to the object,' 'go round' it, and look upon it, 'in all its aspects.' In the latter sense only can self-evidence (as I interpret him) be a characteristic of primary truth.

§ 4. In addition to these criteria various others have been proposed by sundry writers of greater or less consequence, but all are readily reducible to these three, the characteristic of being ultimate having been for the most part rather understood than expressed. Lord Herbert of Cherbury, for instance, advances 'six distinct characteristics' of first truths, namely, 'priority, independence, generality, certainty, necessity, and a spontaneous and universal assent.' It does not require much logical acuteness to discern that 'generality' and 'universal assent' mean the same thing. 'Priority' and 'independence' would seem to cover the same ground, and both to be included within the meanings of self-evidence and necessity. 'Spontaneous assent' is nothing more than self-evidence, while 'certainty' is either self-evidence or necessity, perhaps both. We will then assume these three—self-evidence, necessity, and universality—to be the received distinctive marks of necessary truths as given by the *à priori* schools.

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[1] *Intuitions of the Mind* (London, 1860), Bk. II. Chap. I. Sec. 1, p. 38.

§ 5. The questions which may be mooted in regard to this kind of cognitions may be grouped around two principal points. One focus of discussion is the nature of necessary truths; another is their origin. While, therefore, it may be truly said we cannot know the nature of these fundamental cognitions without understanding also their origin, and answers to inquiries as to their nature can hardly fail to throw light upon their origin, yet we can make conveniently a division of this kind, and more appropriately treat some topics connected with the general subject under the one branch than under the other. Mr. Sidgwick, in his 'Methods of Ethics,' specifies a third class of questions in regard to so-called intuitive cognitions, namely, as to their existence; but we may freely admit that there are truths of apparent self-evidence, necessity, and universality, while all queries as to what is meant by those terms would receive full consideration in an investigation of the nature of the cognitions for which they stand. Accordingly we will endeavour to analyse the acknowledged attributes of these *principia postulanda*, and then deal as fully as space and our abilities will allow with the problem of their origin. And while I cannot expect wholly to avoid trenching upon the ground occupied by John Stuart Mill, Sir John Herschel, and George H. Lewes, in opposition to Dr. Whewell, it will be my purpose to look at the subject from some points of view which were not prominently taken by those eminent philosophers, and to pursue a method of examination somewhat different from theirs.

§ 6. We will begin with the test of self-evidence, of which we have already twice spoken. While it is the case that the vulgar universally and the scientific sometimes attach to self-evidence the meaning of being clearly apparent, and forcing assent on simple inspection, we have noted Dr. McCosh's explanation that a self-evident truth is one which is apprehended by its intrinsic evidence when once its terms are understood. With this latter view, if we use the term at all, it is impossible not to agree, saving a qualification to be elucidated presently. For certainly no truth can be expressed in such a way that all mankind will at once assent to it. A person ignorant of Greek would not be able to assent to a proposition expressed in that language, which would be the most clearly self-evident to him if couched in words of his vernacular. So an Englishman might deny a statement made in his own language, to which, if it were explained and brought home to his apprehension, he would yield unhesitating endorsement. We should have no right to expect a man to believe on its own evidence the truth that *two straight lines cannot enclose a space*, unless he knew what a straight line is and what is a space; nor to anticipate that every person would subscribe to the doctrine that *every attribute has a substance*, if he did not know the meaning of *substance* and *attribute*. But, given to a mind the full comprehension of the terms of which a proposition is composed, and if he assents to the correctness of the enunciation without requiring further proof, such a proposition may be termed *self-evident* in the most philosophical sense of the *à priori* metaphysicians.

§ 7. Now I apprehend that self-evidence is an attribute of a proposition and cognition which concerns only the individual mind (and this is the qualification just referred to). If I believe a statement because it is self-evident to somebody else—to this man, to that, to all the men I ever have heard of, so far as I can determine—I believe it on account of its universality, not on account of its self-evidence proper. But if it is evident *to me* on inspection, it is approximately a self-evident truth. What truths, then, are self-evident to *my* mind? First, all presentative cognition is self-evident. I need no other proof to assure me that I have a pain than the feeling of a pain. No evidence can convince me that I see a light, except seeing it. The only possible demonstration that is of use to make it evident to me I have an idea is the consciousness that I have it. Every presentative cognition carries its own evidence with it, and is in want of no reasoning to support it.

§ 8. Further, though such a statement may seem startling, perhaps, I think it must be apparent to any one, upon reflection, that every representative judgment, in regard to the truth of which the individual mind has no doubt, is also self-evident. The evidence that a proposition is to me true is that I am convinced of its truth. Whatever I believe is to me a truth, and that it is a truth my belief assures me, and with the proposition goes my belief; if I believe the judgment to be a true one, it needs no other evidence, but is as self-evident as is the fact that I feel a pain. To illustrate—I entertain in mind the thought that I was living an hour ago. I have no doubt on that point. If I am asked what evidence I have of the fact, my only reply is, I believe it; I remember it. Belief is the only evidence of belief, memory the only evidence of memory; that I lived an hour ago is a truth to me only as I believe it; in so far, then, as it is a truth at all—in so far as it occurs to me at all as true—it carries its own confirmation; we cannot go back of belief and memory. Take now an example when the certainty is less—*I went to Edinburgh at ten years of age*; on this point my conviction is weak; I do not remember definitely whether I did or not. If it be desirable to settle the doubt, what must I do? I take such steps and bring forward such evidence as will stimulate my memory and establish a firm conviction; and when I have once reached that conviction, nothing could be more evident to me than its truth: I lay aside all thought of the means by which I was brought to belief, and the belief itself only is retained, unless some circumstances arise by which doubt is awakened. If upon sufficient testimony I am induced to believe that *George Washington was the first president of the United States*, when once doubt is expelled from mind as to the fact, no matter how the conviction arises or whence it comes, I believe it in precisely the same way, and it is a truth of precisely the same character to me, so far as self-evidence is concerned, as that *the whole is greater than a part*.

§ 9. That these positions are not unwarrantably taken will further appear from consideration of the nature of presentative cognition. I do not think anybody will be disposed to dispute the statement that my feeling of a pain or my cognition of my existence at a given moment is as completely self-evident to me as that *two and two make four*. Yet it should not be forgotten that without memory and belief I could not know these facts. My cognition of a pain or of my existence is a matter of belief just as much as of knowledge. Without memory and belief there is no continuity of conscious experience; if they were absent I should have no mental life at all, as we understand mental life. Our evidence, then, of a feeling or of self-existence is simply our present consciousness and our representative consciousness, our belief as well as our knowledge. My first warrant for saying, *I am in pain*, *I live*, *I went to school in my boyhood*, *George Washington was first president*, *The World is spherical*, *Nature is uniform*, *The whole is greater than a part*, *Two straight lines cannot enclose a space*, *Whatever is, is*, *Force persists*, in each case alike, is my own conviction of the truth of the statement; this is the prime evidence to me of its truth, an evidence without which it is no truth at all.

§ 10. It must be conceded that this is not the self-evidence of the *à priori* schools. They would say that a truth is self-evident not when it is clearly evident to me alone, but when it is of such a character as to be evident at once to all men. They will grant undoubtedly that a self-evident truth has these two elements of self-evidence—(1) that it is clearly, at once, and by itself, evident to *me*, and (2) that it is clearly, at once, and by itself, evident to other people—all other people, if you please. This is all I am able to make out of self-evidence by the most diligent effort. Taking the second of these elements first, surely there is no way of knowing that a truth is of such a character as to be clearly and at once seen, without extrinsic evidence, by the world generally or universally, except through the knowledge that most men or all men actually *do* so see it or *have* so seen it; and this is nothing other than the criterion of universality, to which we shall by and by come. It may be urged that a self-evident truth is so clear that it cannot help but be seen by all as intrinsically evident; but this is its necessity, the second test of fundamental truths. If, then, there be anything distinctive in this characteristic of self-evidence, it must be somehow and somewhere in the first of the two meanings just given; it must subsist in the fact that the truth is clearly, indubitably, and intrinsically evident to *me*. And the only question then is whether my apprehension, knowledge, or belief of the truths *The whole is greater than its part*, *Force persists*, *Two straight lines cannot enclose a space*, is, apart from considerations of the belief of other people and my own necessity of belief, anything different from the apprehension, knowledge, or belief by me of or in present states of consciousness, or past events, or anything else which I apprehend, know, or believe. To hold that there is any difference, it seems to me, is to confound all knowledge and overturn all intelligence. If we set aside wholly (as we are now supposing) the circumstances of a cognition—its origin, its relations to others than the *ego*, its unavoidableness to the mind holding it, when we come down to the ultimate fact, we can only say knowledge is always knowledge, belief is always belief, to know is to know, and only to know; to believe is to believe, and only to believe.

§ 11. This conclusion appears to dispense with self-evidence as a peculiar mark of postulates. It may still be insisted in the language of Buffier that they are self-evident in that they are 'so clear that they can neither be proved nor attacked by any propositions more clear than themselves.' I cannot, however, see any force to this statement except so far as it declares that such truths are indubitably true to me and to other people; and, as has first been insisted, that they are the latter is the concern of universality; while that they are indubitably true to *me* is an attribute they have in common with everything else that *I* believe. There seems to me, consequently, no advantage in using the term *self-evident* to characterise first principles. I have substituted the characteristic of being ultimate, or not deducible from some other truth; this would separate the axioms and definitions from the propositions of geometry.

There has been brought out, however, in connection with the discussion thus far an important fact, which should not escape notice, and to which, I doubt not, our thoughts will refer frequently as we proceed. This fact is that each mind is the autocrat of its own beliefs; in other words, in the dogma of Protagoras, *homo mensura*, we have the ultimate criterion of knowledge. I have no intention of being now drawn into the famous controversies, for which the Theaetatus of Plato furnishes the text. All that is meant by the doctrine that the individual man is the measure of all things, as applied here, is that when I enter upon the consideration of a proposition, the question ultimately is do *I* believe it? If every other mind in the universe believed a statement, it would be no truth to me, unless *I* believed it. True, the fact that all men do believe a given proposition might induce me also to believe it, but its truth, so far as I am concerned, is ultimately tested by *my* belief. Though all the human beings of whom I have ever heard, though the angels of God believed it, though the Omniscient himself should declare that *the sums of equals are equal*, yet unless I can believe it, it is no truth to me, and I should be forced to maintain that the rest of the universe is wrong. On the other hand, if I believed that the sun moves around the earth, I should be obliged to maintain that belief (so long as I had no doubt) against Copernicus and all the later astronomers. It is not tenable, of course (nor does it follow from the above as a corollary) that no man is consequently ever in the wrong, nor that no man ever can be convinced of error, or change his mind. The simple point is that the last appeal is to one's own consciousness. This is a perception, a cognition, a belief, a truth, ultimately because *I* perceive it, *I* know it, *I* believe it. And if such were all the sophist intended, it is true enough, so far as it goes, that 'perception is science.' Pertinently asks Hermes of Bonn—'Can a subject be any otherwise certain than that *it* is certain, than that *itself, the subject*, is certain?'[1]

§ 12. Let us now turn our attention to the *necessity* of postulated truths. Says Dr. Whewell, 'They cannot but be true,' 'Not only they *are* true, but they must be true;' 'We see that they could not be otherwise;' 'We cannot distinctly conceive the contrary' of them. Dr. McCosh remarks—'Necessity always attaches to our convictions regarding' a cognition of this character; 'I must entertain it and never can be driven from it;' 'I cannot be made to decide' that two parallel straight lines can meet.[2] Observes President Porter, 'The intellect must be constrained by the constitution of its being and the spontaneous workings of its nature to receive them as true.'[3] Cousin calls them 'principles to which it is impossible to refuse our assent and of which the contrary implies a contradiction.'[4] From expressions like these which might be quoted at almost any length, but of which the foregoing are samples abundantly sufficient for our purposes, it will be plain that the fact that men, in however great numbers, *do* regard these principles as true will not satisfy the conditions of necessary truth. Not only *do* I believe it as true but I *must* so hold. The essence of this necessity seems to be disclosed in the important explanation of Dr. Whewell that, 'we cannot distinctly conceive the contrary' of such truths as fall within the present category. But while believing with Dr. Whewell that this (though it may be better expressed) is the characteristic meaning of necessity in this connection, we will not follow him in his error of mixing up necessity with universality. When Dr. Whewell says, '*We* cannot distinctly conceive the contrary,' he means all mankind; or if he does not, he reasons as if he did. Since we have a separate place in which to consider universal agreement, we might as well relegate thereto the appurtenances of that factor: if we do not we shall fail to get a clear and distinct idea of necessity as a separate criterion. In speaking of the latter then I shall always have reference to necessity as apprehended by the Ego, though from the imperfection of language expressions may be general. Perhaps this was Dr. Whewell's purpose also, but he has nowhere stated it as such in terms or even implied it, and I think we shall by and by be able to see that the presence of the idea of universality had a misleading and confusing effect upon his ideas of necessity.

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[1] Note A of *Hamilton*, No. 99, Wight's Ed. p. 155.

[2] *Intuitions of the Mind* (London, 1860), p. 39.

[3] *Human Intellect*, Part IV. Chap. I. Sec. 248.

[4] *Programme of a Course of Lectures on Absolute Truths; Elements of Psychology*. New York, 1864. Appendix.

§ 13. I cannot but think that some of the critics of Dr. Whewell (and among them Professor Bain) have failed to appreciate the force of the qualifying adverb *distinctly*, to which Dr. Whewell calls attention in explicit terms. His expression is not felicitous, but in my judgment he has made evident the fact that he understood the fundamental truth of this whole matter of necessity. In his explanation of what he means by a distinct conception, he admits that we can, in what he calls 'a loose indistinct way,' conceive the contrary of necessary truths. He would readily concede that we can *say*, *A whole is less than its part*, and that this language represents some sort of mental conception, but he would show that if we had in mind the correct conception of a whole, we should be all the time actually making it inclusive of and greater than its part; we should thus be contradicting ourselves in the expression. Or else, we should form a conception of a whole different from the given meaning of whole, and in saying that a whole is less than its part we should be predicating of something not a whole; in fine, we should be assigning a different signification to the word. That we should and do in mental action abide by the position we have once taken, and cannot conceive a thing to be A when we are at the same time conceiving it to be X, is the gist of Dr. Whewell's remarks about the mind's inability distinctly to conceive the contrary of a necessary truth. This amounts to Professor Bain's own principle of consistency, and is an equivalent to an enunciation of Mr. George H. Lewes's doctrine that a truth is necessary when the conditions are not varied. It is also an iteration of the ancient maxim of the logicians, *Whatever is, is.* Though Dr. Whewell's language in the passages before quoted and in other places may be and probably is such as to becloud in some degree his meaning and make it doubtful what he did intend to hold, I am inclined to accord to him the credit of declaring the essential import of necessity as characterising first truths.

§ 14. But whether or not Dr. Whewell did mean the principle of consistency, a better statement of it in its application to primitive judgments is that of Cousin, who defines necessary truths as those 'the contrary of which implies a contradiction.' At any rate Dr. Whewell would not object to this definition, nor can I suppose any of the *à priori* philosophers would find fault with it, so far as it goes, in exemplifying the criterion of necessity. Nor have I yet been able to find one among them who makes anything else out of the test. They are perpetually confounding universality with it, but beyond this unlawful addition, to which we shall again have occasion to allude, there seems to be nothing in the second criterion of *principia postulanda* save that I must believe this proposition, because if I declare it is not true I contradict myself in the declaration, and while I attempt to think it is not a truth I actually am thinking it to be true.

§ 15. Are then all first truths analytical judgments? For such would seem to be the inference from what has gone before. If I contradict myself in asserting the contrary of a proposition, the assertion of that proposition itself is but an infolding of what is already apprehended in its subject. That *the whole is greater than its part* is already implied in the meaning of the word *whole*. Are all necessary truths of this character? If we so maintain we shall have to present a front both against the *à priori* metaphysicians and some of the ablest of their opponents—not, indeed, as to all recognised necessary truths, but as to some of them. On the one side the Kantians will ask us if we soberly claim that the proposition *Two and two make four* is analytical, and that there are no synthetical judgments *à priori.* On the other hand we shall be obliged to contend against Mr. Mill over the proper explanation of the axiom *Two straight lines cannot inclose a space*, and with Professor Bain over the axioms *The sums of equals are equal* and *Things equal to the same thing are equal to each other.* We are thus placed in an unfortunate dilemma. We must either set ourselves in opposition to strong thinkers of both schools, whose agreement upon one point, when they disagree upon most, would seem to be conclusive evidence of the truth of that upon which they are in harmony; or we must relinquish our claim that the necessity of a truth consists solely in the inability to conceive its opposite without contradiction. There is indeed one other alternative; we may conclude that truths which cannot be made evident to be analytical have been improperly placed in the category of necessary truths, and are not such at all but are contingent, and there is no reason why we may not predict that some day or other, and somewhere, those opposites may be acknowledged as true. Shall we then declare that the masters of both schools are wrong, or shall we find some other essential of necessity as a criterion of so-called absolute truth, or shall we relegate to Dr. Whewell's class of experiential truths some which he has instanced in the other division?

§ 16. I shall, therefore, have to ask the reader's patience while I go over in some detail those truths which have been termed necessary in order to subject the more doubtful ones to such analysis as shall be requisite to determine their explicative or ampliative character. We shall do well in the first place to get rid of all truths whose analytical character is not disputed, or at length conceded. We will hence not stay to discuss the following: *The whole is greater than its part; Magnitudes which coincide are equal; Parallel lines can never meet; A circle is a figure every point in whose circumference is equally distant from a point within called the centre; Whatever is, is; The same thing cannot be A and non A; Of contradictories one must be true and the other false; If all men are mortal, some men are mortal*—and in general the propositions styled immediate inferences. I presume no one will dispute that these truths are analytical. To this list may be added such propositions as, *Every effect must have a cause; Every cause must have an effect; Every attribute has a substance; Every phenomenon has its noumenon.* The cognitions represented by the words *cause* and *effect*, *substance* and *attribute*, *noumenon* and *phenomenon* are so related that one implies the other respectively. A cause which has no effect is no cause at all; an attribute which is without substance ceases to be an attribute; a noumenon without phenomenon loses its distinctive character entirely. In allowing the analytical character of immediate inferences we shall see our way clear to a further elimination. If it be granted that the axiom *The whole includes its part*, is analytical, we shall have no difficulty in assuring ourselves that the *dictum de omni et nullo* is also explicative.

Whatever is true of a class may be affirmed of each individual in or included under that class cannot be denied without contradiction, for the essence of a class is the aggregation of individuals having identical or assumed identical attributes. We shall, therefore, be able to dispose at once of all the proved propositions of geometry. They are not synthetical, but are of such a character as to make the test of contradiction applicable to show their necessity. Very truly and forcibly remarks Dr. Whewell:—'However far we follow such deductive reasoning, we never have in our conclusion any truth which is not virtually included in the original principles from which the reasoning started. For, since at any step we merely take out of a general proposition something included in it, while at the preceding step we have taken this general proposition out of one more general, and so on perpetually, it is manifest that our last result was really included in the principle or principles with which we began.'[1] And in the words of Mr. Lewes: 'The axiom "If equals be taken from equals the remainders are equal," may indeed be more rapidly intuited than the particular truth respecting the square of the hypothenuse in the forty-seventh of Euclid, which can only be seen by a mind that has followed the steps of the demonstration; but this greater ease and rapidity of vision does not endow the *seer* with greater certitude; and the second truth is equally irresistible with the first when once the relations are intuited.'[2]

§ 17. A further advantage occurs to us from noting the analytical character of geometrical propositions. It enables us to perceive that if we can reduce any proposition to another or subsume it under another more general than itself, we can lessen the number of necessary truths which will require separate examination. If one proposition is deducible from another, that very fact shows its explicative character.

§ 18. Having satisfied ourselves of the explicative nature of geometrical propositions, apart from the axioms which form the basis of geometry, let us devote a little attention to arithmetical propositions. To begin with, we are met by the declaration of Kant that all mathematical judgments are synthetical, illustrated by the example $7+5=12$, which he essays to demonstrate an augmentative proposition.[3] It may be presumed the author would, in like manner, maintain that $1+1=2$ is also a synthetical proposition. It will be found serviceable to commence with the simplest numbers. Now if $1+1=2$ its truth hinges upon the antecedently admitted truth $1=1$. This is the proposition $A=A$, or in its generalised form *Whatever is, is.* But, according to the Kantian doctrine, if we interpret correctly the words of that author, this latter would be an analytical judgment. Kant defines an analytical judgment to be one wherein the predicate B belongs to the subject A, as something which is contained in it;[1] and again gives as an infallible test of analytical judgments,[2] the principle of contradiction, 'No subject can have a predicate that contradicts it.' To say then that A is not A would be a contradiction in terms. Therefore $A=A$ or $1=1$ is an explicative proposition. And unless 1 *is* 1, $1+1$ cannot be equal to 2. Now in seeking a definition of 2 we are not able to find anything other than *Two is one added to one*; hence one added to one is equal to two ($1+1=2$) since the whole is equal to the sum of its parts; and the denial of the fact that $1+1=2$ involves the denial that *Two is one plus one.* Therefore the proposition $1+1=2$ is implicit in the idea of 2 and is a proposition explicative of that idea. For, if $1+1$ does not equal 2, $1+1=2+$, or $2-$; either of which suppositions contradicts the hypothesis. Taking the next higher number, we find the definition of three to be *One plus one plus one* (and with this definition as well as the other I can but suppose that Kant would agree, since this is his very method of explaining the meaning of numbers)[3] $1+1+1=3$; but $1+1=2$; hence $2+1=3$. Thus also 12 *is* $1+1+1+1+1+1+1+1+1+1+1+1$; but $1+1+1+1+1+1+1$ *is* 7 and $1+1+1+1+1$ *is* 5; or $7+5$ *is* 12; or $7+5=12$; which last is likewise an analytical proposition and cannot be denied without a contradiction in terms; for if $7+5=11$, then the whole is less than the sum of its parts, and if $7+5=13$, it is greater. This seems to accord with Dr. Whewell's view. He says: 'Why is it that three and two are equal to four and one? Because if we look at five things of any kind we *see* that it is so. The five are four and one; they are also three and two. The truth of our assertion is involved in our being able to conceive the number five at all. We perceive this truth by *intuition*, for we cannot see or imagine we see five things without perceiving also that the assertion above stated is true.'[4] While more points than one can be made from these remarks, all that is desired here is to note that in Dr. Whewell's opinion the conception of the number *five* itself involves the truth that *five is four and one.* I conceive the misapprehension into which Kant fell arose from the fact that he did not consider the difference between the method of forming a notion and the expression of it when formed. Of course the conception of 12 is arrived at only by a synthetical process. By successive additions a conception is formed to which the name *twelve* is given. But when once the notion is completed, that proposition which declares its composition is purely analytical.

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[1] *Philosophy of the Inductive Sciences*, Part I. Book I. Chap. V. p. 5.

[2] *Problems of Life and Mind*, Vol. I. p. 354 (Boston, 1874).

[3] *Critique of Pure Reason* (Meiklejohn's trans. London, Bohn). Introduction V. p. 10.

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[1] *Critique of Pure Reason*, p. 7.

[2] *Ibid.* p. 15.

[3] *Ibid.* p. 10.

[4] *Philosophy of Inductive Sciences*, Book II. Chap. IX. p. 2

Again, let us look at the proposition $5-3=2$. *Five is one plus one plus one plus one plus one*; *Three is one plus one plus one*; *Two is one plus one.* Then one plus one plus one plus one plus one equals *one plus one plus one* and *one plus one.* Taking away the former we have *one plus one* or 2. In figures $5=1+1+1+1+1$; $3=1+1+1$; $2=1+1$; $5=3+2$; $3+2-3=2$; $2=2$. Judgments of simple addition and subtraction therefore, when stated in general terms, are analytical; and on these two processes arithmetic (and algebra also) is founded; for to these multiplication and division can be reduced with no difficulty.

In truth, the definition of the numbers above given are not complete but only partial definitions. For instance the definition of three is:

$1+1+1$
$2+1$
$5-2$
$4-1$ etc. etc.

The complete definition of a number is the entire connotation of the name, and as new combinations with and relations to other numbers are discovered they are laid up in the mind as a part of the name's signification and their explicative expression forms the definition.

I am well aware that some of the *à priori* philosophers will refuse to accept as a definition of *Two, one added to one.* They will say that two is more than one added to one; that in ascribing to Kant approval of the phrase, *Five is four and one* we are taking unwarranted liberties with that author, who would only have allowed that five *are* four and one. In other words, that there is an idea of totality involved in the notion *five* which is not found in the idea *four and one,* the latter being a plurality only. In opposition to this theory it may be strongly and conclusively urged that we have growing out of our primitive cognition of agreement and difference a native appreciation of unity and plurality, the two being relative terms; that totality is only a new unity formed by association of pluralities, and in proportion as the association approaches the point of inseparableness the plurality is lost sight of and the unity of the new product is more apparent. I am unable to see any other tenable explanation of the notion of totality, and I cannot discern how it has any force beyond. Five is only a cluster of five units which may be regarded as a whole or a new unit if there be occasion, or may be looked upon in the light of the five units which compose it, if the mind chooses to dwell upon that aspect of the notion.

§ 19. So much for the propositions of arithmetic (and algebra as well). But very intimately connected with all arithmetical and algebraic processes, as also with those of geometry, are some fundamental axioms, on the faith of which the whole superstructure of mathematics seems to rest. Foremost among these stands the second axiom of Euclid, *The sums of equals are equal.* In relation to this truth a very curious difference of opinion exists among philosophers. Singularly enough among those maintaining its analytical character we find the sage of Königsberg, who supports his dictum with the reason, 'I am immediately conscious of the identity of the production of one quantity with the production of the other.'[1] In agreement with Kant occurs Dr. Whewell, who holds that this axiom is in fact an expression of the general condition of intuition, by which a whole is contemplated as made up of parts and as identical with the aggregate of the parts.'[2] Mr. Mill gives as a definition of 'equal magnitudes,' 'those which may be applied to one another so as to coincide,'[3] and proves the equality of the sums of equals by an 'imaginary superposition, resembling that by which the fourth proposition of the first book of Euclid is demonstrated.'[3] In opposition to these three philosophers stands Professor Bain, who states but does not argue at length that the axiom is a synthetical proposition real not verbal.[4] It is to be regretted that the latter did not give a more full expression of the reasons leading him to differ from most other thinkers upon this point. But I imagine we shall have no great difficulty in showing him to be in error and in vindicating the right of the particular axiom in question to be ranked among explicative propositions.

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[1] *Critique*, p. 124.

[2] *Philosophy of Inductive Sciences*, Book II. Chap. IV. p. 3.

[3] *System of Logic*, Book II. Chap. V.

[4] *Logic, Induction, and Deduction.*

I propose to make good this latter assertion by a demonstration depending upon some axioms and definitions, of the former of which different enunciations are given for the sake of greater clearness.

Axiom. Whatever is, is.

(1) A=A, B=B, C=C, D=D, E=E, F=F.

(2) The greater of two quantities is not less than the other nor equal.

(3) The less of two quantities is not greater than the other nor equal.

(4) The whole is greater than its part, and conversely the part is less than the whole.

(5) The whole is equal to the sum of its parts, and conversely the sum of the parts equals the whole.

Axiom. Everything is either A or Non-A.

(6) A and B are either equal in quantity or unequal.

(7) If A and B are unequal A is greater and B less, or B greater and A less.

Definition. Equal Quantities.

(8) Equal quantities are those of which whatever may be affirmed of the total quantity of one must be affirmed of the other, else they cease to be equal.

Definition. Unequal Quantities.

(9) Unequal quantities are those of which whatever may be affirmed of the total quantity of one cannot be affirmed of the other.[1]

Definition. Greater Quantities.

(10) One quantity is greater than another when a part of it is equal to that other.

Definition. Less Quantities.

(11) One quantity is less than another when it is equal to a part of that other.

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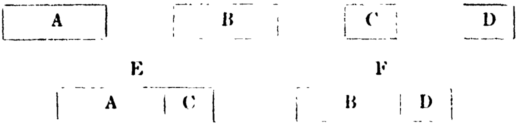
[1] To the definition of equality and inequality we shall presently recur; we will hence not comment upon it here.

Definition. Addition and Subtraction.

(12) Addition is the augmentation of one quantity by another; subtraction is the diminution of one quantity by taking away a part of itself.

Demonstration.

Let A and B be equal and C and D be equal also. If A be added to C and B to D, $A+C=B+D$. Represent $A+C$ by E, and $B+D$ by F; then $E=F$.



If E does not equal F, then it is greater or less, E and F being unequal (6) (7). Suppose it to be greater; one of the following suppositions must be made (Ax. 2) (4).

(a) A *may be greater than* B, C *remaining equal to* D. But this is contrary to the supposition.

(b) A *may be greater than* B, *and* C *greater than* D. Both of these are contrary to the original supposition.

(c) A *may be greater than* D C *being equal to* B. Now if $C=B$, $C=A$ also, since $A=B$ (8), and $A>D$, also $C>D$ (8) which is contrary to the original supposition.

(d) A *may be greater than* D, C *being greater than* B. If then $C>B$, $C>A$, since $A=B$ (8); and since $A>D$, also $C>D$. For if $C>A$, $A<C$ (7); and if $A<C$, $A=$ a part of C (11): let $\frac{C}{x}=$ that part and $\frac{C}{y}=$ the remaining part of C; then $A=\frac{C}{x}$ and $C=\frac{C}{x}+\frac{C}{y}$ (5). And since $A>D$, $D<A$ (7); and if $D<A$, $D=$ a part of A (11): let $\frac{A}{x}=$ that part, and $\frac{A}{y}=$ the remaining part of A; then $D=\frac{A}{x}$ and $A=\frac{A}{x}+\frac{A}{y}$ (5 $A=D+\frac{A}{y}$ (8). But A also $=\frac{C}{x}$ and $C=\frac{C}{x}+\frac{C}{y}$ $\therefore C=D+\frac{A}{y}+\frac{C}{y}$ (8). But $\left(D+\frac{A}{y}+\frac{C}{y}\right)>D$ (4); $C>D$. This latter, however, is contrary to the original supposition.

(e) A *may be greater than* $D+(B-C,)$ *if* C *is less than* B. For if $C<B$, since $C=D$ by hypothesis, A must be greater than D not merely in order that E shall be greater than F, but it must also be greater than so much of B as shall be left after C is taken

out. But $D=C$; hence $A>D+B-D$ (8) or $A>B$ which is contrary to the supposition.

(f) C *may be greater than* D, A *being equal to* B. This is contrary to the supposition.

(g) C *may be greater than* B, A *being equal to* D. If $A=D$, $D=A$ (1) and also $D=B$ since $A=B$ (8). Hence $C>D$ which is contrary to hypothesis.

(h) C *may be greater than* B, A *being greater than* D. This leads to contradiction in precisely the same manner as (d).

(i) C *may be greater than* $B+(D-A)$, *if* A *is less than* D. This is seen to be contradictory in the same manner as (e).

(k) A may be greater than $B+D$, which is contrary to hypothesis.

(l) C may be greater than $B+D$, which is contrary to hypothesis.

If then $E>F$ and these eleven suppositions are all possible suppositions under which E can be greater than F, it is seen that to assume E to be greater than F involves contradiction. Therefore E cannot be greater than F. If we assume it to be less than F, then F is greater than E (7) and one of the same eleven hypotheses must be made with reference to this case (*mutatis mutandis*) which have just been given, and in any one with the same results. Hence every attempt to prove the sums of equals unequal ends in contradiction, and therefore it is true that the sums of equals are equal, and the axiom is exhibited as one having the same kind of necessity as *The whole is greater than its part.* It is therefore analytical and implied in the conceptions of equality and inequality, addition and subtraction, greater and less.

The demonstration of the same truth by superposition, suggested by Mr. Mill, may be made with geometrical magnitudes. If E and F are equal, on being applied each to each they will coincide throughout. If not equal they will fail to coincide, and their parts will fail to coincide. A then will not be equal to B, nor C to D, which is contrary to supposition.

It may be said that we have not exhausted all possible conditions under which E may be greater than F. If not I leave to the critic the task of producing another hypothesis than the eleven given, and I will then examine the same with him to see if it does not lead to contradiction without making use of the axiom which we are essaying to prove. At present writing no other suppositions occur to me unless we take fractions of the quantities before us, and in that event there would be no different results so far as I can see. We should only have different expressions of the same conclusions.

§ 20. In the somewhat tedious demonstration just gone over, we made use of two axioms in various forms equivalent to and included under the enunciations *Whatever is, is* (Law of Consistency) and *Everything is either A or Non-A* (Excluded Middle). We furthermore employed definitions of equality and inequality, greater and less, addition and subtraction. But we have really implied other axioms than we have stated; in fact we have been making use of the axiom *Things equal to the same thing are equal to each other*, and the axiom *If A is greater than B and B is greater than C, A is greater than C.* Let us look first to the axiom of mediate coincidence. If Mr. Mill's definition of equal magnitudes is accepted there is no escape from the implication that within its purview things equal to the same thing are equal to each other; and the proof by superposition is easy. I am not able to conceive any other notion of equality than that involved in Mr. Mill's definition. To Mr. Jevons's doctrine of the Substitution of Similars allusion has been made in several places, and with that doctrine I am in full accord. Equality means identity as to quantity, complete coalescence, interchangeability, power of substitution of one equal quantity for its fellow. As to geometrical plane figures, therefore, Mr. Mill's definition seems to me sufficient: but it does not go quite far enough for a general definition. Not all equal quantities are susceptible of proof by superposition. To be sure it may be said that we ascertain their equality in last resort only by showing coincidence of surfaces and lines. But I think a clearer and more striking statement of the meaning of equality in general may be found and which will cover those cases wherein superposition is not immediately practicable. If we consider that equality means identity of quantity, that equal quantities are those in which the quantity of quantity is, so to speak, the same, we may construct the definition before given (§ 19):

Equal quantities are those of which whatever may be affirmed of the total quantity of one must be affirmed of the other, else they cease to be equal. I say of the total quantity, for assertions might be made of one dimension of quantity in one which could not be made in another; one might be longer, shorter, or deeper than the other, though the total quantity would be the same.

From this definition it follows very evidently that *Things which are equal to the same thing are equal to each other.* For let A=B and C=B; A=C also, since it may be affirmed of A and B alike that C equals them, A and B being equal and it being affirmed of one of these equals that C is equal to it.

§ 21. By the aid of the definitions and axioms before given the explicative character of the *argumentum à fortiori* is made apparent. That argument is analysed in (d) of § 19. It amounts simply to the truth: *whatever is greater than the whole is greater than a part thereof*, and, correspondingly, *whatever is less than a part is less than the whole.* Both these truths are explicative of our ideas of greater and less, whole and part, equality and inequality. It is not necessary again to go over the demonstration. Proof may also be made by superposition.

§ 22. We can now very shortly dispose of the five axioms of Euclid following the second, and which are admitted on all hands to be analytical. *If equals are taken from equals the remainders are equal* follows from the definitions of equals and unequals before given. So also, *If equals be added to unequals the wholes will be unequal*; *If equals be taken from unequals the remainders are unequal*; *Doubles of the same are equals*; *Halves of the same are equal*; are deducible from the first two axioms and follow from the definitions. The eighth, ninth, and tenth axioms need no further remark. (*Things that coincide are equal; The whole is greater than its part; All right angles are equal.*) The eleventh axiom has long been held a deduction from the definition of parallel lines.

§ 23. The twelfth axiom of Euclid is regarded both by Mr. Mill and Dr. Whewell as synthetical. *Two straight lines cannot enclose a space* is a proposition in the opinion of these gentlemen which is not implied in the meaning of straight line. Professor Bain's answer to this is ample. He remarks that the definition of two straight lines expresses the fact that when two lines are such that they cannot coincide in two points without coinciding altogether they are called straight lines; and coinciding altogether means that there shall be no intervening space: therefore to say that two straight lines can enclose a space is a contradiction in terms.[1] I cannot avoid expressing my wonder that Professor Bain is able to see anything more augmentative in the axioms of the sums of equals and of mediate coincidence than he sees in this explicative judgment in regard to straight lines. If equals are to remain equals, whatever is added to one must be added to the other; if not, their equality vanishes as soon as any change is made in one of the quantities; the two must remain constant or must vary together. I am wholly unable to see how equality fails to imply this signification. More clearly still, if possible, does the axiom of mediate coincidence appear as analytical, for the essence of equality is that the quantities equal shall be interchangeable as to quantity, and what is predicated of the total magnitude of one must also be predicated of the other. It may be said that this is a deduction from the axiom. But the criticism would apply equally to axioms with regard to which there is no dispute; it might be as truly said that a definition of a whole as that which is greater than a part would depend upon the axiom *The whole is greater than a part*, and therefore the latter is synthetical. What is here maintained is that the axiom of mediate coincidence, of the sums of equals, and the argument *à fortiori* stand upon precisely the same ground and are of exactly the same character as the axiom $A = A$, or *Magnitudes which coincide are equal.*

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[1] *Logic, Induction* (London, 1870), p. 210.

§ 24. Dr. Whewell (and Mr. Mill agrees) instances as an indemonstrable axiom of a synthetical character the proposition *Two straight lines which cut one another are not both of them parallel to a third straight line.* And yet neither of these two thinkers would be indisposed to concede that the proposition *Two straight lines which are parallel to a third straight line are parallel* is demonstrable. In fact the latter is given as a distinct theorem in geometrical treatises. Admitting this as proved, it follows from Dr. Whewell's own definition of parallel lines that *Two straight lines which are each parallel to a third straight line do not intersect one another.* A simple obversion then gives us *Two straight lines which intersect each other are not both parallel to a third straight line.*

§ 25. Kant and Dr. Whewell are in accord in holding that the axiom *A straight line is the shortest distance between two points* is augmentative. 'When we declare that "a straight line is the shortest distance between two points" is this merely an identical proposition—the definition of a straight line in another form? Not so: the definition of a straight line involves the notion of form only, and does not contain anything about magnitude; consequently it cannot contain anything equivalent to shortest.'[1] '"A straight line between two points is the shortest" is a synthetical proposition. For my conception of *straight* contains no notion of quantity, but is merely *qualitative*. The conception of the shortest is therefore wholly an addition, and by no analysis can it be extracted from our conception of a straight line.'[1] Professor Bain takes the ground that this property of straight lines is demonstrable as a corollary from the proposition *Two sides of a triangle are together greater than the third side*.[2] But it seems just as reasonable to prove, as some geometricians do, the fact that two sides of a triangle are in their sum greater than the third side, by means of the truth that a straight line is the shortest distance between two points, as to demonstrate this last by the other. Yet I do not hesitate to claim that Professor Bain is right in his conclusion that the truth under discussion is purely analytical. It is idle to assert, as do Kant and Whewell, that the meaning of straight line carries no idea of quantity, when the admitted and sole signification of line is *that which has length*. Would Dr. Whewell presume to say that length is a notion which 'does not contain anything of the notion of magnitude!' If then one of the dimensions of quantity forms the whole essence of *line*, everything else being abstracted, what, I beg to ask, makes the essential difference in lines but their relative length? They are measured and determined according to whether they are longer or shorter: and as every length has a point of beginning and a point of ending in order to be distinguished as a length at all, as connecting two points a straight length is the less length as compared with all other lengths. Other lengths we term in contradistinction, curved lengths. It thus appears from consideration of the meaning of *line* that the distinctions of long and short are the fundamental ones in determining the great divisions of lines, and the antithesis between straight and curved is the principal one made with regard to lines; since a broken line is only an aggregation of straight lines. A further evidence in favour of this position is the fact that no definition of straight line except as characterised by shortness seems to have any force. Most of the definitions given are of some such kind as the following:—'*A straight line is one which lies in the same direction between any two of its points*.'[3] Inasmuch as a straight line is the standard of direction this definition means no more than if it said—*A straight line is one which lies in the same straight line*, etc. The adjective *straight* marks some definite attribute as contradistinguished from some other over and above what is implied in *line*: and mathematics thus far has been able to establish no other than that of superlative shortness between two points. The true definition of straight line, therefore, is *the shortest length between any two points*.

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[1] *Philosophy of Inductive Science*, Part I. Book I. Chap. V. p. 5.

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[1] *Critique of Pure Reason*: Introduction V.

[2] *Logic, Induction*, p. 206.

[3] *Elements of Geometry*. Chas. Davies, New York, 1870.

§ 26. We have now concluded our examination of those axioms which are peculiarly mathematical, having taken up all with regard to which there has been controversy and having also brought before us all the chief truths which are postulated in the mathematical sciences. I have next to make reference to some truths whose necessity is claimed and whose applications lie in the more concrete physical sciences. The necessary character of most of these, as tested by the criterion of contradictoriness (styled by him, I think unwisely, inconceivability) of the opposite, has been very ably and clearly set forth by Mr. Herbert Spencer.[1] The leading axiom of this group is that doctrine styled the Persistence of Force. *Force is not destroyed* is one statement; with this goes the doctrine of correlation—*Force*, Moving Power, Matter in Motion, or Momentum, is embodied in various forms all mutually convertible at a given rate; and no force is ever lost.[2] In order to arrive at the meaning of *force* we will begin by taking Dr. Whewell's definition. 'We adopt the term *force* and use it to denote that property which is the cause of motion produced, changed, or prevented.'[3] If now we suppose that force *is* destroyed, upon this definition we affirm that a cause exists which is the cause of nothing, but this is a contradiction by the very meaning of cause, which implies an effect. So likewise if we adopt Mr. Bain's view of force, we are led to the same conclusion. Says the latter author: 'Matter, force, inertia . . . are three names for substantially the same fact. At the bottom there is but one experience, although varied in the circumstances, namely, the experience of putting forth muscular energy in causing or in resisting movement. . . . Matter is nothing except as giving the experience called also force; force is only matter moving or obstructing movement.'[4] For matter to lose its existence, force must be exerted since there is change; we have therefore matter moving or moved from somewhere to nowhere, that is, matter not moving at all; but if not moving at all there is no change, and hence no destruction. Or, on the other hand, if force is destroyed, force changes from something to nothing: but if it changes to nothing, it does not change in anywise and is not annihilated. Thus taking the definitions of fair representatives of two opposite schools of philosophy, we find the contrary of the truth *Force persists* involves contradictions. We may accept it hence as an explicative judgment. From this are inferrible the truths *Motion is continuous*, *Matter is indestructible*, *Forces are convertible at a given rate*, and the three laws of motion, together with various subordinate deductions. All these are admitted by Mr. Bain to follow from the principle of the conservation of force, and their expression he deems to be made in verbal propositions, though the doctrine of force conservation he holds to be synthetical. His mistake in the latter case seems to me to be evident without further discussion.

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[1] *First Principles.*

[2] Bain, *Logic, Induction*, p. 21.

[3] *Philosophy of Inductive Sciences*, Part I. Book III. Chap. V. p. 1.

[4] *Logic, Induction*, p. 225.

§ 27. In elucidating the character of the primary truths of physics we have also implied the explanation of the axioms of cause and effect. That *Every cause has an effect* and the converse we have already seen to be an analytical proposition beyond the doubt of any one; but when we declare that *Every event has a cause*, we assert something which may not so promptly be conceded to be a necessary truth not to be denied without contradiction. Yet this too will be discovered on reflection to be equally so with its predecessors in our course of remark. In regard to the meaning of the word *cause* there is the long-standing disagreement between those philosophers represented by Dr. Thomas Brown, who regard a cause as being only an invariable and (as Mr. Mill shows) unconditional antecedent of a phenomenon and those of whom Dr. Whewell is a sample, who hold that a cause is a power which produces an effect. With the first class the axiom of causation would assume the form, —*Every event is uniformly preceded by some other event*; for the latter the expression above given will probably be deemed sufficient, bearing in mind always the signification of *cause* just brought out. At the outset a suspicion of the analytical nature of these propositions is generated by the etymology of the word *event* (*evenio*). An event is that which *comes out of*; if then it comes out of, it comes out of something; that is, it has an antecedent.

And this suspicion is reduced to a certainty when we find that every word which may be substituted as a synonym of event carries with it the same implication of *becoming*. *Happening*, *appearance*, *phenomenon*, *occurrence*, are none of them exempt from this notion. But *becoming* is no becoming, unless it be a coming of something from something; hence at least the word *event* or its synonym has a signification which when unfolded expresses the truth that *Every event is preceded by some other event*. As to uniformity of succession, if we deny it, we assert that events happen fortuitously, with no one invariable, unconditional, antecedent. *Fortuitously* means by chance, and chance is the negation of uniformity. Yet every attempt to conceive of events happening by chance in this sense, returns upon itself, for if we assume that they do so happen, chance is itself the law or cause of their happening. Moreover, whether we accept the view of causation held by Brown and Mill, or that urged by Dr. Whewell and Dr. McCosh, we shall allow that every event has a beginning; but if it begins to be, it comes into being by force residing in itself or in something else, and this force is a cause. *Whatever begins to be must have a cause*, to deny which brings only contradiction. This truth has been developed so often by philosophers of nearly every complexion that it is needless to dwell upon it. It appears therefore that the axiom *Every event has a cause*, or, as stated by Dr. Whewell, *Nothing can take place without a cause* in either expression, is true by implication from the meaning of the terms constituting the proposition.

§ 28. As a corollary from what has just been said, it is clear that the necessary truths of causation and those of the conservation of force cover the same ground. A cause is a definite power or force producing or followed by a definite event or effect. To announce that *Every event has a cause* and that *Force persists* is to declare the same truth in different terms. A comprehensive statement of the law in both aspects is the following:—*Every event that happens is definitely and uniformly connected with some prior event, or events, which happening it happens, and which failing it fails.*[1] This, as has been shown, is a postulate, its necessity lying in the fact that to deny it involves contradiction. The same may be said of the equivalent truth, *Nature is uniform*. Dr. McCosh has fallen into a singular error in supposing anything else to be meant by the uniformity of nature than the uniformity of causation. He seems to imagine that those who have declared as a necessary truth that nature is uniform have intended to indicate that every event in nature is always followed by the same event. He refers to Reid and Stewart, and argues from expressions like this of Reid: 'God hath implanted in human minds an original principle by which we believe and expect the continuance of the course of nature and the continuance of those connections which we have observed in times past.'[1] Dr. McCosh takes this as a correct statement of the law of uniformity in nature, and accuses Mr. J. S. Mill of having fallen into a 'glaring fallacy of confusion in confounding our belief in causation with our belief in the uniformity of nature.' And drawing his inferences as to what the belief in nature's uniformity means from the above-quoted sentence of Reid and another like it, Dr. McCosh considers it 'vain, therefore, to speak of the belief in the uniformity of nature as a self-evident, necessary, or a universal principle.' He might have added, if he took the words of Reid as authority, that the principle is not true. But surely no considerable portion of the scientific or intelligent world has ever maintained as a necessary principle that 'we attend to every conjunction of things which presents itself, and expect the continuance of that conjunction.' This is indeed 'far too loose a form in which to present the maxim:' but this is not the doctrine of the uniformity of nature. The latter is that every event is preceded by *some* invariable unconditional antecedent 'which happening it happens and which failing it fails,' and not that the same conjunction of events will always recur. The composition of causes and the intermixture of effects often prevent the latter, and that too in pursuance of the law of uniformity itself. Dr. McCosh therefore, in charging Mr. Mill with confusion, is liable to be slain with the very weapon he aimed at another, the only confusion which occurs being in the mind of the President of the College of New Jersey, who erects into a philosophical doctrine of consequence that which has existed only in loose opinions and erroneous interpretations of loose expressions. It may reasonably be surmised that Dr. McCosh, beholding the every-day returning proofs from experience of the principle of nature's uniformity, upon thought of regarding it as a necessary truth began to feel alarm for his theory of such truths being independent of experience, and casting about for a method of escape from the difficulty, thought he had found it in distinguishing between this truth and a higher and more general relation of cause and effect; which device, however, proves to be a hiding of the head only in the sand.

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[1] Bain, *Logic*, *Induction*, p. 16.

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[1] Quoted from Reid in *Intuitions of the Mind*, p. 275.

§ 29. I do not feel called upon to enter into more detailed illustrations of the necessity of the truths lying at the foundation of concrete science upon the principle of contradiction, for the reason that the work has been done so thoroughly and completely by Mr. Spencer. I may add also that Dr. Whewell's efforts in the same direction are of no inconsiderable importance. They have not the scope of Mr. Spencer's explanations, and are somewhat impaired in their effect by the author's heterodoxy on the question of the origin of such knowledge, yet his exposition of the necessity of these judgments is conclusive, so far as it goes. In treating of the axioms of cause and effect, Dr. Whewell does not in terms assert that they are explicative; on the contrary, the sense in which he uses the word *axiom* would force him to regard them as augmentative: but notwithstanding this, in all his reasonings and statements, he makes the law of contradiction the test of the necessity of the truths. He first gives a definition of cause, and then remarks that the conception which he endeavours to raise 'supplies us with the only mode by which such principles [those concerning cause and effect] can be stated in a general manner and made to lead to substantial truth and real knowledge. Understanding cause, therefore, in this sense, we proceed to our axioms.'[1] He then lays down the first axiom that '*Nothing can take place without a cause*;' in the course of the discussion of which, he says, 'this axiom expresses to a certain extent our idea of cause; and when that idea is clearly apprehended, the axiom requires no proof and indeed admits of none which makes it more evident.' We are to understand, then, that the axiom in question expresses a part of 'our idea of cause;' that so far forth as it does express this idea, it requires no proof.

I think it would be difficult to show upon the foregoing quotations that the axiom is anything other than a proposition explicative of the idea of cause. But if this is so, what becomes of the doctrine that an axiom is something different from a definition? Dr. Whewell concludes his argument of the necessity of his second axiom (*Effects are proportional to their causes, and causes are measured by their effects*) with an appeal to the idea of cause. 'All these measures are consistent with the general character of our idea of cause.'[1] That is, this settles the matter; if they were inconsistent the axiom would be untrue. So of the third axiom, *Reaction is equal and opposite to action.* This truth 'depends on our conception of action and reaction. Like our other axioms this has its source in an idea, namely the idea of cause under that particular condition in which cause and effect are mutual.'[2] Notwithstanding many passages like these in which Dr. Whewell strenuously maintains that axioms are explications of ideas, yet in more works than one we find him insisting on a real and fundamental difference between axioms and definitions, though he holds the latter also to be explicative of conceptions. Thus there runs through Dr. Whewell's expositions and discussions a distinction drawn by the author which his own explanations make difficult and obscure, and the reasonableness of which he fails to establish. A careful reading of what Dr. Whewell has written impresses one with the idea that his main ground for calling axioms different from definitions is that they are given under different names in the books. Definitions and axioms 'have their origin in the idea of space, and are merely modes of exhibiting that idea in such a manner as to make it afford grounds of deductive reasoning. The axioms are necessary consequences of the conceptions respecting which they are asserted; and the definitions are no less necessary limitations of conceptions; not requisite in order to arrive at this or that consequence, but necessary in order that it may be possible to draw any consequences and to establish any general truths.'[3] 'Like the definitions, these axioms flow from the idea of space [*i.e.* mathematical axioms], and present that idea under various aspects. They are different from the definitions; nor can the definitions be made to take the place of the axioms in the reasoning by which elementary geometrical properties are established.'[4] 'The necessity of this axiom [that two straight lines cannot inclose a space] is of exactly the same kind as the necessity of the definition of a right angle of which we have already spoken.' 'These axioms supply what the definitions leave deficient; and they along with definitions serve to present the idea [of space] under such aspects that we can reason logically concerning it.'[5] Dr. Whewell admits that definitions and axioms are both necessary in the same sense, they both flow from the idea, both are indispensable to reasoning. What then is the exact difference between them, we vainly ask! The only answers Dr. Whewell gives are (1) that axioms must be posited in addition to the definitions, and (2) that axioms cannot be reduced to definitions. We cannot get along, he says, with the definition of parallel lines that they can never meet; we must further adopt some axiom concerning them in order to reason, as that two straight lines which cut one another cannot both be parallel to the same straight line.[1] The author seems to suppose that a definition in a single phrase is exhaustive, and because it has been the habit in geometrical treatises to give a certain statement as a definition that therefore it is the whole definition and nothing else can'be definition. It is certainly true that what are *called* axioms are indispensable to formal reasoning, in addition to what are *called* definitions, but it does not therefore follow that they are in their nature different; on the contrary, the presumption is of the reverse. It would be exceedingly difficult for any one to make out that the intension of the conception of parallel lines does not include with it the properties expressed both in the axioms and definitions concerning them. No more is the fact that a particular axiom cannot be reduced to or deduced from a definition of that which is the subject of the affirmation or negation, an argument tending to prove anything except that neither alone exhausts the idea and that both are declarations of what is essential to the idea. The axioms are a part of the explication of the conception (to use Dr. Whewell's favourite term), and with what are technically denominated definitions make up the comprehension of the idea. Dr. Whewell thinks no definition of a straight line could be given which would render superfluous the axiom concerning straight lines. Certainly not, unless we incorporated the axiom into the definition, in which case we should have no need of the axiom in a separate form; nor would any violence be done to truth as affecting our notions of a straight line and deductions therefrom. The whole matter seems to be set forth very plainly in Dr. Whewell's own language: 'Axioms and definitions are the proximate constituent principles of our demonstrations; and the intimate bond which connects together a definition and an axiom on the same subject is not truly expressed by asserting the latter to be derived from the former. This bond of connection exists in the mind of the reasoner, in his conception of *that* to which both definition and axiom refer, and consequently in the general fundamental idea of which that conception is a modification.'[1] If, therefore, there is such an intimate connection between the two, both having their source in a common conception and common fundamental idea and both being expressions of that idea, what, pray, is the use of making a real distinction between definitions and axioms, and how can any attempt to draw such a distinction be successful? Certainly Dr. Whewell has not succeeded, and I do not see how any one could succeed in such an endeavour if he allows both to be explications of the conception. One form of expression may be called *definition* and one form *axiom*, if convenience so dictate, but there is no fundamental essential difference between them.

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[1] *Philosophy of Inductive Sciences*, Part I. Book III. Chap. IV. pp. 1, 2.

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[1] *Philosophy of Inductive Sciences*, Part I. Book III. Chap. IV. p. 8.

[2] *Ibid.* p. 5. [3] *Ibid.* p. 2. [4] *Ibid.* p. 3. [5] *Ibid.* Chap. V. p. 7.

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[1] *Philosophy of Inductive Sciences*, Part I. Book III. Chap. IV. p. 3.

§ 30. In asserting that the necessity of definitions is of the same kind as that of axioms, Dr. Whewell deprived himself of the most plausible argument which could be advanced to support his theory. This argument John Stuart Mill, whose acumen is always greatly superior to that of Dr. Whewell, and who agrees with Dr. Whewell upon this point, was not slow to see and bring forward. Mr. Mill says the difference between definitions and axioms is that the latter are true 'without any mixture of hypothesis.'[2] Thus the axiom that things equal to the same thing are equal to each other is true unconditionally; so the first law of motion 'is true without a particle of qualification or error.' But subsequently, in discussing the same subject, Mr. Mill does that which effectually undermines his own position. In treating of arithmetical propositions, after affirming that axioms like *The sums of equals are equal* and definitions (improperly so called, he says) such as *one and one are two* are 'exactly true,' 'independent of hypothesis;' 'on more accurate investigation,' he concludes that after all 'there is one hypothetical element,' namely that $1 = 1$. By allowing this he destroys his own posited difference between axioms and definitions, for he applies the hypothesis to both. Moreover, in speaking of the same class of propositions in addition to the verbal character of *Three is two and one*, he finds a real truth asserted in the covert assumption that collections of objects exist impressing the senses thus $^{o}{}_{o}{}^{o}$' etc. The element of hypothesis then, which must be introduced in order to establish even the truth that $1=1$ or $3=3$ is that 1 or 3 exists. Now Mr. Mill would have been the last person in the world to deny that the axiom of mediate coincidence is independent of the hypothesis that *Equals exist* or that the first law of motion is any legitimate, synthetical law, except on proof of the supposition that *Motion is*. But if he admits it, where is his distinction between definitions and axioms? *Equal magnitudes are those which may be so applied as to coincide*, upon assumption that such magnitudes exist, is true with no more admixture of hypothesis than that assumption involves. The hypothetical part can be removed by observation and experiment; then in a given case we have only to show that two magnitudes do coincide, to apply our knowledge to use. But the proposition *The sums of equals are equal* also requires the assumption that *Equals exist*, and is not true without that admixture of hypothesis; and this hypothesis must also be verified by an appeal to experience. Both definitions and axioms then require the hypothesis *If A exists*, and, admitting this, both have equal certainty and exactness of truth; while omitting it, one is just as analytical as the other and one is no more true, exact, or far-reaching than the other. Mr. Mill considers that Dr. Whewell 'has greatly the advantage of Stewart' on this 'important point in the theory of geometrical reasoning.' I cannot help esteeming, on the contrary, that both Locke and Stewart have greatly the advantage over Dr. Whewell and Mr. Mill; and had not the latter found in 'two or three fundamental truths' in the list of axioms, stumbling-blocks, in that he failed to see their analytical character, supposing there was a difference when there was none, we should have found him the supporter and not the opposer of Dugald Stewart, and here as on most other questions differing from instead of agreeing with Dr. Whewell.

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[1] *Philosophy of Inductive Sciences*, Part I. Book III. Chap. V. p. 8.

[2] *System of Logic*, Book II. Chap. V. Sec. 3.

§ 31. If the reader will reflect upon the number of implied truths which are attached to any one judgment, as, for instance, *All x is y*, or *No x is y*, taking into account both the privatives and positives, and noting also the extreme difficulty of getting some, particularly of the privatives, distinctly in mind, from their unfamiliarity and complexity, I think he will have some insight into the causes of this extraordinary diversity of opinion upon so many of the necessary truths. Some phases of new truths have been more frequently exhibited than others, and men have had no occasion to investigate and lay out in their proper order those other truths which are implied as obverse, converse, limitations, privatives, or those otherwise equivalent. When therefore a truth has been presented which concerns the same subject with another, but seems to be different and not deducible from it, thinkers have been ever prone to regard the two as in no manner mutually implied but as each resting on an independent basis, when in reality they are both on the same foundation and one is but the opposite face of the other or its privative. And as new and uncommon expressions have come up from time to time which have seemed to indicate ultimate truths, philosophers, instead of seeking to affiliate them with ultimate truths with a different expression already familiar, have rashly concluded that because they seem indemonstrable, they are independent and not involved in or included with any other.

And now, in bringing to a close at this point our special study of the criterion of necessity, I may venture to remark that, though there are numberless ways of expressing fundamental truths, and doubtless many different expressions of the same truths yet to be invented, and though in this chapter we cannot pretend to have exhausted all at present in use; nevertheless no one of those now acknowledged can be advanced, nor will any new one be discovered, which will not be found upon examination to be an unfolding of an idea or conception—analytical, definitive, and determined solely as to its necessity by its contradictoriness to or harmony with the notion of which it is an explication.

§ 32. We expressly limited our explanations of the criterion of necessity to that necessity which is demanded by the mind of the Ego. Nevertheless we could not have proceeded thus far, had it not been for the fact that such necessity is required and apprehended by the mind of men universally. This is what is meant by Dr. Whewell when he argues that if any property belong to right-angled triangles *necessarily* it must belong to *all* right-angled triangles. His demonstration amounts to the assertion—if a proposition *must be* true to all men, or to the human mind, necessarily it follows that it *is* true to all men, as a matter of fact. This is the test of universality, namely, if observation could be had of all men's minds it would be found that they do assent to the truth of these propositions, and, so far as has been observed, it has always transpired that they do. Dr. Whewell gives universality as a criterion in this sense deductively following from the former test of necessity. While free to allow the fact of universality of these cognitions, I must, as before, enter my protest against confounding it with necessity. If Dr. Whewell and his followers attach to the meaning of this latter attribute contradictoriness of the opposite, to *all* minds, I see no excuse for a separate, independent criterion called universality; for if a proposition *must* be true to all men, to say that it *is* true to all men, is only to repeat the same thing under another expression. The only way by which we know that one of these truths *must* be true to all men is by finding that it actually *is* true, either in discovering that the same truth is held in different expressions among great numbers of men or in recognising the fact that I deem it to be irresistibly true, and in assuming that others about me have minds constituted like my own, the proof of which assumption can be obtained only by observation and comparison. Therefore when Dr. Whewell declares that if a property belongs to right-angled triangles necessarily, it belongs to all right-angled triangles, he argues—to reduce still further our epitome of his thought—that since a right-angled triangle is not without contradiction conceived by me as otherwise than possessing a certain property, and since all men have minds constituted like mine, and all minds so far as I know possess the same conception, therefore all men and all minds *do* possess it. That a thing is so because it is so is certainly true, though not striking; but we cannot gain any addition to the proof by saying 'because it *must* be so.' The latter expression may serve to emphasise the fact, but does not strengthen the argument.

To avoid a *circulus in probando*, in claiming that a truth is universal because necessary, while establishing its necessity by the fact of its universality, the adherents of Dr. Whewell have the resort of the German metaphysicians of the school of Jacobi. They can say, I have a faculty by which I intuitively know that all minds are constituted like my own, and that these truths must be received as true by all minds that exist in the universe; their necessity is above proof seen in the light of reason. But to such thinkers it may be pertinently asked how are they going to show that there are other minds at all? How but by certain signs observed in the world about, associations with living beings, seeing them, hearing them, through certain media of communication? And if these signs are necessary to indicate the fact of the existence of other minds, or even if they are available merely for such a purpose, why are not similar results of observation necessary and available to show the constitution of those minds and the products of their operation? Indeed, how can such indicia be evidence that there are other minds at all, except by indicating what is the constitution of such minds? The *must* of Dr. Whewell, therefore, means only that *I* must, and so far as collated evidence extrinsic to my consciousness can assure me, all other men *do* believe these truths. Nay, the certainty that *I* must, receives its assurance from the fact that I always *do* and there has been no break in the chain of mental affirmations. But Dr. Whewell, I believe, makes no claim to such an intuitive faculty as Jacobi and Coleridge try to establish, though if he did I do not think it would help him. There seems no alternative therefore, but to convict himself of confusing the respective limits and scope of the two criteria under discussion.

§ 33. If, however, it should still be insisted that there is more in the criterion of necessity than refers to the Ego, it is fatal to the views of Dr. Whewell that he should require a corroboration of the dictum that all men *must* see the truth of necessary principles, from observation as to the fact whether or not they do see them. Perhaps he would say it is not *required*; yet at all events he could not deny that he puts into such prominence as to make it appear of consequence a corroborative test of just this character. But how is there any corroboration at all to be derived from observation, if independently of all observation the thing is peremptorily and infallibly established? Even if observation should unfailingly contradict instead of corroborating the necessity of postulated truths, yet on the hypothesis now supposed, it would not be of the slightest consequence. If any one were to bring forward as proof evidence of any kind from experience, what possible relevancy has it when the point can be proved not only without but in spite of experience? It is a very significant fact, and one greatly militating against the strength of their position that the advocates of super-experiential truth are always very happy—nay, often exultant—when they find that what they conceive is impregnably established independently of experience, receives from experience support and confirmation. Such confirmation they usually point to in great triumph as vindicating their theory: but how on their principles it is of any account at all, is past finding out.

§ 34. From considerations like the foregoing it is made to appear that there can be no independent test of first truths by universality if such truths are universal because necessary; and further that to attach to necessity in such a case the characteristics of universality compels us to reason in a circle, since if reception by more than the Ego is an essential part of the notion of necessity, and we deduce universality from the fact that a proposition *must* be true, we are alternately making use of the one test to prove the other. Hence, if we preserve universality as a distinct criterion, we must accord to it and divert from necessity whatever evidence is derived from any community of agreement between the individual mind and other minds—whatever, in fact, establishes the general character of the truth. It next behooves us to notice specifically that universality is a distinct and important test of postulates, and moreover is the great characteristic test. If it be admitted that I cannot without contradiction conceive the contrary of the truth, *Two straight lines cannot enclose a space*; irrespective of other people's conceptions, that truth is no more to me than the contingent truth, *I see a rose.* While I am looking at the object, the latter truth is as much necessary as the former; I cannot conceive its contrary without contradiction unless I disbelieve the evidence of the senses; and if I did disbelieve it, I should not acknowledge the truth, *I see a rose.* But even if I could conceive the contrary of the latter, but not that of the former, the former would have no more consequence than the latter, if all associations of other instances and other people were removed; that is, if its universality were not considered. The truth would not be *Two straight lines cannot enclose a space*, but *these two lines do not to me now enclose a space.* The last would be an expression of no first principle whatever (at least not directly). Thus we see the effect of abstracting what the attribute of universality brings to a truth; it simply abrogates all differences which separate such a truth from the ordinary truths of presentative cognition; its distinctive character as a basic truth is gone wholly. Take away the generality of a postulate, and it ceases to be a postulate. That *the whole is greater than its part* receives its special significance from the fact, not that I see this particular whole to be greater than a part, not merely from the fact that I have always perceived a whole to be a greater than a part, but from the fact that all men everywhere conceive a whole to be greater than a part, and that consequently all wholes are greater than their respective single parts.

Besides, as already stated, the universality of a proposition is an element affecting directly its truth in the individual mind. Not only does universality require that all other men everywhere shall subscribe to the given truth, and that it shall be true universally outside of my own belief in its truth, but it requires that this very belief of mine shall be constant. It may be impossible for me to conceive without contradiction the contrary of a truth at a certain time, but this would not make such a truth what is commonly denominated a necessary truth. The necessity must have subsisted at all times with me, and in order that I understand the truth as having this necessity I must be able to say that this necessity is not, as a fact, variable. Therefore the representative power is called into use, and without such a power uniformly exhibiting a proposition as irresistibly true, that proposition has no such truth. Its very essence is to have generality, not only in the minds of others but in my own mind. When, therefore, there is an absence of this universally-concordant testimony of my own mind and of the minds of others concerning a proposition (unless indeed absence occurs from a failure of understanding the terms of the proposition), there is an absence of that which essentially characterises a so-called necessary truth.

§ 35. Therefore, so far is the statement of Dr. Whewell that a truth is universal because it is necessary from being correct, that its exact opposite is the literal truth, namely, that a proposition necessarily true derives its special and peculiar kind of necessity from the fact of its being universally received. Of course the universality of a truth has nothing to do with that necessity which compels me to intuite a relation the instant it is presented. So far as the contradictoriness of the opposite relates to a particular cognition presentatively apprehended by the mind of the Ego this necessity may be an independent attribute, though not peculiar to the truth; but the moment the truth assumes any generality, the characteristic of universality is introduced. And, inasmuch as we distinguish the necessity of proper necessary truths by the test of the general impossibility (not on my part alone but on the part of anyone) of conceiving their opposites without contradiction, this necessity is substantially dependent upon the companion attribute of universality. The meaning conveyed by the term *necessity* as applied to first truths which is not common to all truths, is that of a more intimate and indissoluble association, springing from the fact of their greater universality. It is this signification which gives a warrant for preserving the term as a peculiar mark of postulates. It does not tell the whole story to say that these truths are received by all men; it must also be told of them that the force of association is so great as to give them in the individual mind a precedence over all other truths from the fact that they are never contradicted. And though this latter is a consequence of their universality, and by reason of universality the necessity is thrown out into a greater prominence, it seems to be both justifiable and expedient to retain *necessity* as a separate characteristic of this class of truths. When we analyse its meaning, however, it either becomes an attribute common to all truths or for its peculiar force appears dependent upon universality. But the universality of the experience gives stronger associations a greater certainty and a more permanent position to the truth in the individual mind; this is properly indicated by the term *necessity*. The two terms fit into each other and give completeness to the description.

§ 36. Having thus, by an examination of first truths analytically conducted, investigated their nature and found the meaning of their distinguishing tests, we here terminate the first branch of our discussion. We find them in a proper sense, ascertained by our analysis, to be truths universal and necessary; they must also be ultimate to separate them from deductions. In conclusion, as descriptive of their character in other words than have been employed heretofore, we will place before us the language of Father Buffier, wherein we shall see (in the light of the preceding discussion) very clearly set forth the three criteria of finality, universality, and necessity, and those alone. According to this philosopher first truths have the characteristics of being:—

'1. . . . si claires que quand on entreprend de les prouver, ou de les attaquer, on ne le puisse faire que par des propositions, qui, manifestement, ne sont ni plus claires ni plus certaines. 2. D'être si universellement reçues parmi les hommes en tous temps, en tous lieux, et par toutes sortes d'esprits, que ceux qui les attaquent se trouvent dans le genre humain être manifestement moins d'un contre cent ou même d'un contre mille. 3. D'être si fortement imprimées dans nous, que nous y conformions notre conduite, malgré les raffinements de ceux qui imaginent des opinions contraires, et qui eux-mêmes agissent conformément, non à leurs opinions imagineés, mais aux premières vérités universellement reçues.' [1]

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[1] *Traité des Vérités Premières*, Secs. 51, 52.

II.

§ 37. It was intimated in the earlier part of this Chapter that an investigation into the nature of necessary truths would throw light upon their origin. Indeed, were it not indispensable in an examination of this sort to be minute and explicit, we might consider that enough had been already asserted and implied as to their source, to supersede the necessity for further words. But if this were claiming too much, at least we have now laid a foundation for dealing with the problem of the origin of primitive judgments far more intelligently than we could have done without the survey which has just been finished. In coming now to that problem, we shall be asked to decide between the conflicting pretensions of those who maintain that all our knowledge springs from experience and those who urge that we have knowledge not properly to be considered as having such parentage, and that what we have termed universal and necessary cognitions are of the latter description. And if we find that such cognitions do not come from experience, we shall be asked to explain whence they do come.

§ 38. While we may accept as the subject of the examination to be made in connection with the origin of necessary truths the question whether they are or are not of experience (since this is and has been for centuries the point at issue between two rival schools in philosophy), yet when we come to inquire closely what it is they have been fighting about, we are surprised to discover how vague and ill-defined have been the principles for which the respective sides have announced themselves as champions. Though we read in the works representing one side or the other that all knowledge does or does not come from experience, few undertake to tell us in clearly-defined terms what they mean by experience. Hardly any one has attempted an analysis of the notion which is marked by that name, though it might have been supposed that this would be the first thing disputants would have concerned themselves about. Dr. Whewell, for instance, although at the beginning of a chapter entitled, 'Of Experience,'[1] he informs the reader that he employs 'the term Experience in a more definite and limited sense than that which it possesses in common usage,' wholly fails to make the sense in which he does use the term at all 'definite and limited.' Indeed, that learned author, without analysing the meaning of the word and without plainly telling what he does and what he does not include under it (except that he includes 'intentional experience, or observation'), at once begins to dogmatise about what we know and what we do not know by experience. An epigram has even furnished the greatest and most conspicuous text for the controversialists, some accepting with Hobbes and Gassendi the aphorism *Nihil est in intellectu quod non prius fuerit in sensu*; others being satisfied with this maxim only with the addition of Leibnitz *Nisi intellectus ipse*; while a few have gone so far as to reverse the dictum and declare that nothing is in the sense which was not first in the intellect. Therefore, as before we felt it requisite to examine critically into the meanings of the terms *self-evidence*, *necessity*, and *universality*, so now we shall find it equally necessary to ascertain what is implied or to be properly implied in the term *experience*.

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[1] *Philosophy of Inductive Sciences*, Part I. Book I. Chap. IV. p. 1.

§ 39. The most eminent experience philosophers of modern times affiliate themselves with Locke; and the latter is usually esteemed by the *à priori* metaphysicians as the most noteworthy exponent, and perhaps as the most formidable champion, of that philosophy. If then those of another family point to Locke as the parent of the experience philosophy, and if those who adhere to the same allow the relationship of their views to those of Locke, we shall be justified in studying this author with the hope of learning what *experience* means. And as there is no satisfactory way of arriving at the opinions a man holds except by taking them at first hand, in his own words, we will quote:

'§ 2. Let us then suppose the mind to be, as we say, white paper void of all characters without any ideas; how comes it to be furnished? Whence comes it by that vast store, which the busy and boundless fancy of man has painted on it, with an almost endless variety? Whence has it all the materials of reason and knowledge? To this I answer, in a word, from *Experience*. In that all our knowledge is founded; and from that it ultimately derives itself. Our observation, employed either about *external sensible objects or about the internal operations* of our minds, perceived and reflected on by ourselves, is that which supplies our understandings with all the materials of thinking. These two are the fountains of knowledge, from whence all the ideas we have or can naturally have, do spring.

'§ 3. *First*, our senses conversant about particular sensible objects do convey into the mind several distinct perceptions of things, according to those various ways, wherein those objects do affect them. And thus we come by those ideas we have of *yellow, white, heat, cold, soft, hard, bitter, sweet,* and all those which we call sensible qualities, which when I say the senses convey into the mind, I mean they from external objects convey into the mind what produces there those *perceptions*. This great source of most of the ideas we have, depending wholly upon our senses, and derived by them to the understanding, I call sensation.

'§ 4. *Secondly.* The other fountain from which experience furnisheth the understanding with ideas is the *Perception of the operations of our own minds within us*, as it is employed about the ideas it has got; which operations, when the soul comes to reflect on and consider, do furnish the understanding with another set of ideas, which could not be had from things without; and such are *Perception, Thinking, Doubting, Believing, Reasoning, Knowing, Willing,* and all the different actings of our own minds, which we, being conscious of, and observing in ourselves, do from these receive into our understanding as distinct ideas, as we do from bodies affecting our senses. This source of ideas every man has wholly in himself; and though it be not sense as having nothing to do with external objects, yet it is very like it, and might properly enough be called internal sense. But as I call the other *Sensation* so I will call this *Reflection*; the ideas it affords being such only as the mind gets by reflecting on its own operations within itself. By reflection then, in the following part of this discourse, I would be understood to mean that notice which the mind takes of its own operations, and the manner of them, by reason whereof there come to be *ideas* of these operations in the understanding. These two, I say, viz. external, material things, as the objects of sensation and the operations of our own minds within as the objects of reflection, are to me the only originals, from which all our *ideas* take their beginnings. The term operations here I use in a large sense, as comprehending not barely the actions of the mind about its *ideas*, but some sort of passions arising sometimes from them, such as is the satisfaction or uneasiness arising from any thought.

'§ 5. The understanding seems to me not to have the least glimmering of any *ideas*, which it doth not receive from one of these two. *External objects furnish the mind with the ideas of sensible qualities*, which are all those different perceptions they produce in us; and the *Mind furnishes the understanding with ideas of its own operations.*'[1]

These words of Locke are quoted at this length and cannot be too carefully noticed, not merely because it is always better to take an author's own language than the explanation, but particularly in this case, because the author in question has been made the victim of one of the most inexcusable misrepresentations of which there is account in the whole history of philosophy. It is one of the numerous merits of Dugald Stewart that he showed how totally destitute of foundation was the notion which had seemed to take possession of the philosophical world, that Locke was a promulgator and advocate of the doctrine that all our knowledge resides in and comes from sensation. After the perfectly plain language which we have just noticed, it seems marvellous that such a perversion of a writer's position could ever have gained credit. But not only did this misconception receive credence, but even since Stewart there have been many who have lent their support to this error with a most astonishing ignorance of the facts or obtuseness to them. It behooves us, therefore, to be on our guard and to take no second-hand account of Locke's views when we can refer to the original.

§ 40. According to Locke, then, experience of sensations and experience of ideas, or the mind's own operations, is the source of all knowledge. Experience gives us two broad lines or streams of phenomena, the one being those which are directly connected with the external world and the other those which are primarily connected with mind, as a source. The senses furnish the mind 'with ideas to think on;'[2] man begins to have ideas 'when he first has any sensation;'[3] and then the mind comes to reflect on its own operations about the ideas got by sensation, and thereby stores itself with a new set of ideas . . . ideas of reflection.'[4] 'The impressions that are made on our senses by outward objects that are extrinsical to the mind; and its own operations, proceeding from powers intrinsical and proper to itself, which when reflected on by itself becomes also objects of its contemplation, are . . . the original of all our knowledge.'[4] All our knowledge consists in impressions received from the senses and in the products of reflecting upon, including recalling, comparing, generalising, and elaborating these impressions, such products being ideas, and the process of thus receiving and elaborating these impressions is experience; so that whether we learn by receiving sensations or by operating mentally upon those sensations, we acquire knowledge by experience. That there may be experience, therefore, we must postulate:

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[1] *Essay on Human Understanding*, Book II. Chap. I.

[2] *Ibid.* Sec. 20. [3] *Ibid.* Sec. 23. [4] *Ibid.* Sec. 24.

First. A Non-Ego capable of producing impressions upon or making presentations to an Ego.

Secondly. An Ego capable of receiving such impressions or presentations of a Non-Ego, of retaining and representing them. Indeed, more is demanded, namely, an Ego capable of feeling and volition, but as the question of knowledge does not deal specifically with the other sides of mental phenomena, these need not be taken into account. Having given these *postulanda* therefore, (to repeat) the process of receiving, retaining, and representing impressions is experience; and the products of experience are cognitions which have been thus received, retained, and represented.

§ 41. Thus having seen what experience is, so far as we may have succeeded in defining that term, it is now pertinent to inquire the sources whence those derive knowledge who claim that we have any superior to experience. We may instance two general classes of these, exhibiting the two most important positions assumed by the philosophers now under consideration; and, indeed, to one of these two probably all the *à priori* theories can be reduced. The first of these classes comprises the Cartesians and those holding substantially the same views with them, who sustain the doctrine that we have certain ideas innate to the mind, as, for instance, the idea of self as existing and the idea of God. As soon as the mind comes into being or consciousness, it finds itself the possessor of certain ideas ready-formed; to which it does nothing (in order to use and apply them) but to attach names or express them in proportion. To whatever extent this doctrine may have been carried before, its refutation by Locke deprived it of all subsequent vitality, so that it has not been held without essential modification by any writer of reputation since his day; and it is admitted by the *à priori* metaphysicians themselves as insufficient, misleading, and untrue. Remarks President Porter (himself an intuitionalist):—'Locke, as is well known, rejected the doctrine of innate ideas, and protested most vigorously against it, in the first book of his Essay. This protest was of the greatest service to philosophy in delivering it from the vague and fantastical assertions upon this subject which had been allowed before his time. It has been questioned and may be doubted, whether any sober and considerate thinker ever received the doctrine in the form and sense in which Locke rejected it. But it is certain that many philosophical writers have expressed themselves in language which warranted the interpretations which Locke thought it necessary to refute.'[1] Dr. McCosh also may be cited as one who, though believing in truths independent of experience, bears witness to the abandonment of the innate idea theory. Such being the state of the philosophical mind upon this subject, we need not waste time in considering it, simply observing that what we shall have to say upon the other class of kindred opinions can be adapted very readily and is equally applicable to this.

§ 42. The other division of thinkers of which I spoke embraces those who aver that the mind is endowed, not with ready-formed ideas independent of experience, but with a capacity of apprehending such ideas. Here we find Leibnitz, the Kantians, and Dr. Whewell; though differing considerably among themselves in their modes of expression and in minor points of opinion, they are all upon the common platform whose two chief planks are that mind is the source (from its constitution) of certain ideas independent of experience, and that the criteria of these truths are their necessity and universality. According to Leibnitz:—'The innateness of the ideas must not be held as though they were explicitly and consciously contained in the mind, but rather the mind possesses them potentially and only virtually, though with the capacity to produce them out of itself.'[2] 'In Locke there are various particular truths not badly set forth; but on the main point he is far from right, and has not caught the nature of the Mind and of Truth. If he had properly considered the difference between necessary truths, i.e. those which are known by Demonstration, and the truths that we arrive at to a certain degree by Induction, he would have seen that necessary truths can be proved only from principles implanted in the mind—the so-called innate ideas; because the senses tell indeed what happens, but not what necessarily happens. He has also failed to observe that the notions of the Existent, of Substance, Identity, the True and Good, are innate to our mind for the reason that it is innate to itself and comprehends them all.'[1] Locke with all his power failed to see the difference between *necessary truths*, whose source is in the understanding, and *truths of fact* drawn from sense, experience, and confused perceptions.[2] According to Kant: 'Though all our knowledge begins with experience, it by no means follows that all arises out of experience. For, on the contrary, it is quite possible that our empirical knowledge is a compound of that which we receive through impressions and that which the faculty of cognition supplies from itself (sensuous impressions giving merely the occasion) an addition which we cannot distinguish from the original element given by sense, till long practice has made us attentive to and skilful in separating it. It is, therefore, a question which requires close investigation and is not to be answered at first sight—whether there exists a knowledge altogether independent of experience and even of all sensuous impressions. Knowledge of this kind is called *à priori* in contradistinction to empirical knowledge which has its sources *à posteriori*, that is, in experience.'[3] Knowledge *à priori* is independent 'of *all* experience.'[3] 'If we have a proposition which contains the idea of necessity in its very conception, it is a judgment *à priori* . . . . If a judgment carries with it strict and absolute universality, that is, admits of no possible exception, it is not derived from experience, but is valid absolutely *à priori* . . . Necessity and strict universality, therefore, are infallible tests for distinguishing pure from empirical knowledge, and are inseparably connected with each other. . . . . Each being by itself infallible . . . . We have judgments which are necessary and in the strictest sense universal, consequently pure *à priori*'[4] etc. etc. According to Dr. Whewell:—'The necessity and universality of the truths which form a part of our knowledge are derived from *Fundamental Ideas*, which those truths involve. These ideas entirely shape and circumscribe our knowledge; they regulate the active operations of our minds without which our passive sensations do not become knowledge. They govern these operations, according to rules which are not only fixed permanent, but which may be expressed in plain and definite terms; and these rules, when thus expressed, may be made the basis of demonstrations by which the necessary relations imparted to our knowledge by our ideas may be traced to their consequences in the most remote ramifications of scientific truth.'[1] 'By speaking of space as an Idea, I intend to imply, as has already been stated, that the apprehension of objects as existing in space, and of the relations of positions, etc., prevailing among them, is not a consequence of experience, but a result of a peculiar constitution and activity of the mind which is independent of all experience in its origin, though constantly combined with experience in its exercise.'[2]

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[1] *Human Intellect*, Part IV. Chap. II.

[2] Schwegler's *Hist. of Philos.*, Seelye's trans. (N Y. and London, 1866), p. 218.

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[1] Letter of Leibnitz to a friend: Bain's *Mental Science*, Appendix, Origin of Knowledge, pp, 56-8.

[2] *Nouveaux Essais.*

[3] *Critique of Pure Reason*, Introduction (Meiklejohn's trans.).

[4] *Ibid.*

§ 43. All these philosophers allow that we have *some* knowledge derived from experience—such as the contingent or experiential truths of Dr. Whewell. They also admit that all our knowledge begins with experience: *Cognitio omnis a mente primam originem, a sensibus exordium habet primum.*'[3] Whatsoever knowledge we possess, then, independent of experience, or having a different origin, has its source in 'the understanding' (Leibnitz); 'the faculty of cognition itself' (Kant); or in 'a peculiar constitution and activity of the mind' (Whewell).

§ 44. If knowledge all begins with experience, the question naturally arises, at what point does that knowledge which is 'independent of all experience' come in. I presume the *à priori* philosopher would concede that knowledge is cognition, and that we may call a single separable item of knowledge a cognition. What we desire to know, then, is when and where first appears in the mental history of an individual a cognition which is independent of experience. They claim that space is such a cognition, and this, all agree, is reached at a very early age. Let us suppose that the first perception an infant has is of the pressure of clothing upon its body. This pressure is the experience with which knowledge begins. According to the theory now before us, there is some knowledge, and that experiential, before any higher cognition enters. But when we analyse the sensation in question we find contained in it two twin notions—extension and resistance. Both of these, however, are *à priori* notions, the one of space, the other of force. It would seem, therefore, that these two ideas are apprehended at least as soon as the sensation; it cannot be said that knowledge begins or is cognition unless it be a cognition embracing these particulars. But these particulars are notions independent of experience. On their own showing, consequently, it appears that cognition does not begin with experience any more than with *à priori* notions. This might be illustrated by reference to time and very likely other so-called *à priori* cognitions; and the whole conclusion would seem to accord with Dr. Whewell's views thus expressed:—'We cannot derive from appearances, by the way of observation, the habit of representing things to ourselves as in space; for no single act of observation is possible any otherwise than by beginning with such a representation and conceiving objects as already existing in space.'[1]

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[1] *Philosophy of Inductive Sciences*, Part I. Book I. Chap. V. p. 1.

[2] *Ibid.* Book. II. Chap. II. p. 1.

[3] *Patricius*; quoted with approval by Hamilton and endorsed by Pres. Porter.

§ 45. Again, if man does not have the *à priori* cognition of space with the first sensation, at the very beginning of knowledge, then it must in its full meaning be born to his mind at some subsequent assignable point, or it must gradually grow up. Now if it gradually grows, it comes by continual accretions, and is a product of many sensations and representations of sensations—a product, in fine, of sensation and reflection, that is, of experience. Moreover, if we consider either the hypothesis of gradual growth to be true or that of a sudden bursting in of the cognition upon the mind at some definite period after the first sensation, there is in either case a time in the existence of the human beings, when there is no idea of space, a fact which, if made out, destroys the universality of the cognition, and universality is, according to Kant 'an infallible test' of *à priori* truth. Besides, as a further result it appears that we may have some experience without the cognition of space, and hence the latter is not necessary to or conditional for experience, as the *à priori* philosophers declare it to be. But it may be said that we have this idea potentially, and when we understand it we see that we have always had it, and could not have been without it though we may have gone on for a long time without the distinct consciousness thereof. We are hence shut up to the conclusion that we can have a cognition without knowing that we have it, which seems absurd; the most people would unhesitatingly agree with James Mill in holding that having an idea and knowing that we have it are not two things but one and the same thing. Yet even if there were two, we are not relieved from difficulty, for how could I know in such a case that I had had the idea of space, except by reflection upon my past mental experiences; hence we acquire the idea of space through the medium of reflection, that is, it comes from our experience. There is always this resort, to be sure: we may say that we have at the beginning a cognition of *a* space, but not of all space, or space as a whole: the latter we acquire by many experiences, generalising from them. Dr. McCosh would accept this solution: but we are precluded from it by most of the *à priori* logicians, who say (and I think with reason) that making the idea of space as a whole a generalisation from individual spaces, makes it originating in and from experience. And if we are right in ascribing such a view to Dr. McCosh, still his *space* as a whole is a different thing from the space intuitively beheld in a single experience. *Space* is not *à priori*; some unknown quantity, some x may be *à priori*, and out of comparisons of x, x, x, etc., a generalisation is made which is called *space*. But even on this supposition there is difficulty; for if we concede x to be an *à priori* truth, we are confronted with an obstacle in the fact that by hypothesis, *à priori* truths are not subject to generalisation: they are themselves seen to be universal and necessary—not merely general, but universal at the outset. Hence either Dr. McCosh's space in an individual instance is not an *à priori* cognition, or if it be, it is the same with the whole of space, and there is no need of generalising to get the latter idea.

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[1] *Philosophy of Inductive Sciences*, Book II. Chap. II. p. 1.

§ 46. From the consideration of such a universal and early cognition as that of space, so universal that no one is found who is without it, and so early that no one can remember when he had it not, we discern the perplexities and absurdities into which the *à priori* metaphysicians must be thrown, if they grant that our knowledge begins in experience. The same confusion would be illustrated *à fortiori* in the case of those cognitions which are less primitive and less pervasive, if there be any such among necessary truths; but there is no need of our repeating the process. Hence the upholders of *à priori* truth will find their theory exploded with their own ammunition, if they persist in allowing that all knowledge begins in experience. The most they can do is to say that all our knowledge has in its beginning an *à priori* element and an experiential element: but to hold that the latter has priority is destructive of their hypothesis.

§ 47. They might claim that all cognition from first to last is *à priori*: if they did this, they would deny the reality of the external world. More, they would be obliged to deny all progress, growth, or change in the human mind. For, since *à priori* truth is universal and necessary, as they would have it, it is as perfect and complete as knowledge can be: and if all our knowledge be of that character, there would be no need that we should be wiser. We should each one spring into being, like Pallas, endowed with a plenitude of wisdom, not capable of increase or diminution. Or, indeed, they would thus open the door whence leads the path to universal scepticism, a path which has been trod, but the journey over which brought nothing either to the traveller or to the world. The *à priori* philosophers, however, do not resort to this extreme, as a rule. They say *some* of our knowledge comes from experience and some is *à priori*. Let us, therefore, see to what this admission leads. It will be found, I think, to conduct us to conclusions no less ruinous to the *à priori* doctrine than the last, though the consequences may not seem as startling. An interesting query at once presents itself for resolution, namely, whether it is to be held that, inasmuch as *à priori* cognition is supposed to be independent of experience, so, correspondingly, experiential cognition is independent of the *à priori* source of knowledge. One might naturally enough infer so, for, if an *à priori* cognition has in it nothing from an experiential source, a cognition from experience might conceivably have no *à priori* origin. And as a fact, if we thus suppose that every cognition is from one source wholly, or that a cognition may come from one source alone, we shall be doing no violence to the apparent position of the *à priori* schools. Dr. Whewell thinks it 'abundantly clear' that from experience 'we obtain much knowledge . . . which could not be procured from any other source.'[1] They are not, however, consistent or consentient here. Kant and others regarded all cognition as having an *à priori* element under which the experiential is subsumed; the mind furnishing the form, and experience the matter, using the term *experience* in the meaning of sensation or knowledge by the senses. It would hardly be possible that any one should now maintain that we have any cognitions with which the 'constitution of the mind' has nothing to do; and 'the constitution of the mind' is the *à priori* source of knowledge. But do the *à priori* philosophers really imagine that the experiential school holds that the mind contributes nothing to a cognition of experience? Leibnitz found fault with Locke's comparison of the native mind to a piece of blank paper; when the former added to the old maxim the three words *nisi intellectus ipse*, the world applauded the correction of what it esteemed a great oversight of Locke. Nevertheless, does any one suppose that Locke, in comparing the mind to a paper written upon, was oblivious of the fact that the *paper* was there before the writing? Nothing is in the intellect before sensation, save the intellect itself, is the dictum of Leibnitz: nothing is on the paper but the paper itself, said Locke. What is the difference, pray? Again, do the intuitionalists believe that their opponents, if the latter consider the mind as paper written upon, are so ignorant as not to be aware that if the pencil operates upon the paper, the paper operates equally upon the pencil and both are necessary to make the mark? Would the experience philosophy maintain that truths of experience are wholly independent of 'the understanding,' the faculty of cognition 'itself,' or 'a peculiar constitution and activity of the mind?' Assuredly not, unless I misunderstand greatly the spirit of that school. Since then the *à priori* philosophers are not agreed upon any meaning of their own to be attached to the word *experience*, hardly in fact deigning to give a definition of it at all; and since the other schools never claimed (I do not think even Hobbes did) that the intellect does not from its constitution contribute something to cognition, it will be proper to lay down as fact that experiential cognitions have a point of agreement with *à priori* cognitions in that both have an element supplied by the cognitive power or capacity itself.

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[1] *Philosophy of Inductive Sciences*, Part I. Book I. Chap. IV. p. 1.

Now, if we have found thus much community, it is important to inquire and ascertain definitely the difference between the two. The *à priori* thinkers will be at no loss here. They will say: Truths of experience may have an *à priori* source from experience, while pure *à priori* cognitions have nothing from experience whatever; they are distinguished by their 'necessity and strict universality.' We are thus brought round again to the two criteria already so much discussed. And whereas, before, we met Dr. Whewell trying to show the necessity of these truths by the fact that no experience can prove them true, now we find him, and doubtless his followers, arguing that they are independent of experience because they are necessary and universal!

§ 48. Our previous analysis of the meaning of *necessity* as applied to a cognition brought out the fact that this attribute alone was not a distinguishing one by which to separate truths of the character now under discussion from any other truths. It may be well in this place to emphasise that conclusion by an application to one of Dr. Whewell's contingent truths. In regard to these I make the claim, based on what has before been demonstrated, that they are just as necessary as the author's proper necessary truths. I will take a somewhat complicated example. Dr. Whewell thinks, for instance, that 'for anything which we can see,' 'it might have been otherwise' than that '*a lunar month contains thirty days.*' Let us compare this truth with the axiom *Two straight lines cannot inclose a space.* In order to discover the relative necessity of the two, we must remove all the accompaniments of generality. We must suppose that we have an idea brought into our minds in some way that *The moon is a body which has revolved around the earth in thirty days.* This is a proposition depending for its truth upon accuracy of observation; and though we have not by the change of expression removed all generality, we have done so sufficiently for present purposes. Now if in like manner we divest the other propositions above given of accompaniments of universality, we have *These two lines do not to me now inclose a space*, which, like the other, is obviously dependent for its correctness upon observation. In both cases alike, if the observation be reliable, the truths have the certainty which actual experience brings. In the former proposition there is, however, no opportunity for an intuition (I use the word in its legitimate sense, as applied to presentative knowledge). No one can see the moon revolving around the earth and follow it in its course constantly. A number of observations must be made, and considerable calculation gone into. The object now appears and now disappears. Accordingly, there is much inference necessary to establish the fact that the moon has once revolved around the earth in thirty days. In order to place the proposition more nearly on a par with that in relation to straight lines, we must admit the hypothesis that we have seen the moon in motion around the earth and followed it with our eyes unremittingly for thirty days, not losing sight of it nor the earth. If then, having no repetition of instances and no generalisations, we attempt to conceive of the moon's performing the given revolution in twenty days, we shall find ourselves foiled in the attempt; for we can only gain such a conception by the aid of associations of other bodies revolving around a given centre in different times, which is altering the conditions postulated; we thus replace the cognition with which we set out with another one foreign thereto, and by so doing we contradict the cognition which is the only datum from which we were to proceed. By the second proposition we are to conceive of the moon revolving around the earth in twenty days, when we have no other fact before us than that the moon has once completed the revolution in thirty days, no associated or generalised fact being allowed to come in. That such a conception is impossible under such conditions needs no argument. Precisely the same is it in regard to the other truth mentioned; I have only an intuition of two straight lines as not inclosing a space. I cannot conceive the fact to be otherwise without altering the conditions of the phenomenon. I can conceive of two lines inclosing a space, but they are not the lines before me but other and different lines; and in order to gain such a conception even I must call in to my aid recollections or associations. More obvious perhaps will be the same line of demonstration pursued with a simpler experiential truth.

§ 49. If I have succeeded in making it clear that, so far as necessity goes, as taken by itself, all cognitions are alike, the so-called necessary truths standing on exactly the same footing as those which are termed contingent (for the first full formulation of which doctrine the world is indebted to George H. Lewes), we are now ready to add the element of universality greater and less. Dr. Whewell mentions among his contingent truths *Salt dissolves in water.* Suppose, having once seen salt dissolve in water, we add a second and a third experience of the same kind; we are more impressed with the fact; we retain it better, and are more certain that it is a general fact. If now we have on many occasions seen the same phenomenon, in no case having seen salt placed in water and failing to dissolve, the truth grows more general and more certain. Still further, if every one of whom we have heard as trying the experiment reports a similar experience, the certainty of the fact is increased. Further, if every time we open our eyes we saw on all sides of us salt dissolving in water, so that we could not represent a single experience of the outside world without introducing a picture of such dissolution; if this were repeated every day of our lives, and everybody else of whom we have ever seen or learned bore witness to a similar experience, does any one suppose that the truth would not be as universal and necessary as that *Two straight lines cannot inclose a space?* Would it not be true, not merely that salt *does* dissolve in water, but also salt *must* dissolve in water? Would it not be wholly repugnant to the idea of salt that it should not dissolve in water? Could we conceive of this latter without contradiction? And would not this truth be as common, as familiar, and as indisputable as the other? Now the situation with regard to straight lines above cited, and with the other so-called necessary truths, is no other than that just described. From birth to death not a day or a waking hour goes by without our seeing the material from which we abstract the conception that two straight lines do not inclose a space. The fact is evidenced all about us; no contrary or opposing instance ever occurs, nor do we ever hear of any; it becomes an essential part of an idea of two straight lines in juxtaposition. It thus appears that an origin from and growth in experience will account for so-called *à priori* truths, and that in this way they come into being.

§ 50. This line of argument is not a new one. It has been developed with great force and clearness by John Stuart Mill and Sir John Herschel, and for this reason I do not amplify it. Yet the *à priori* philosophers have not been disposed to yield a ready assent to its validity or conclusiveness. They make a distinction between generality and universality; the former, they urge, experience may give, but not the latter. With Dr. Whewell they iterate and reiterate, using vain repetitions, as the heathen do, that experience cannot possibly give universal truths. With Kant they solemnly adjure the world that 'an empirical judgment never exhibits strict and absolute, but only assumed and comparative universality (by induction); therefore the most we can say is, so far as we have hitherto observed, there is no exception to this or that rule. If, on the other hand, a judgment carries with it strict and absolute universality, that is, admits of no possible exception, it is not derived from experience, but is valid absolutely *à priori*.'[1] If 'strict universality characterises a judgment, it necessarily indicates . . . a faculty of cognition *à priori*.'[1] The 'strict universality' of a judgment indicates its necessity; but 'strict universality,' I take it, means nothing else but necessary universality, not a universality obtained by trial; and with Dr. Whewell's argument, that because a proposition *must* be true, it *is* true, universally, we are already familiar. It would be a great comfort to anyone studying the work of the *à priori* metaphysicians if he could get rid of this perpetual amphiboly of necessity and universality. First, necessity proves universality, and then universality is called in to prove necessity. If one is dependent upon the other, tell us, pray, which one you mean to stand upon as the foundation; and if they are independent each of the other, why persist in deriving one from the other or demonstrating the existence of one by that of the other? After as patient and careful thought as I am able to give the matter, I cannot make anything else out of Kant's 'strict universality' but this:—a strictly universal proposition is one which is not only held by myself at all times to be true, but also by all other people of whom I know or have heard, at all times and in all places, and which will be true to me to-morrow, next year, and for ever, and which will be held by all sentient beings in the future, and which I should find, were I there, is now held in all places by all sentient beings. Probably Kant would have agreed that this is a correct explanation of what he intends by 'strict universality.' We observe then, that the characteristic amounts to a general present and past experience with no exception, and a belief in a future experience. What is the ground of this belief? Is it anything more than the fact that the experience always *has* been so without exception? If we were to take away present and past confirmations, would there be any such belief at all in regard to the truth of that which we have not seen? Indeed, would there be any conception whatever of the proposition or notion? Certainly not, if, as the *à priori* thinkers concede, experience is the occasion of all knowledge. Again, if in the past we had found an exception to the truth of a given general proposition, would our belief that in every place and in all future time it will prove true, be unshaken? Would not our belief in its 'strict universality' be absolutely dependent upon the fact that no exception has heretofore been discovered? That we can only judge the future by the past, that we can only determine the unknown by the known, are propositions as true in science as in popular tradition. All that 'strict and absolute universality' can give is a strong belief that under such and such circumstances certain experiences would come to pass, a belief which is strong exactly in proportion to the corroboration from past experience.

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[1] *Critique of Pure Reason*, Introduction II.

A striking illustration of the justice of the remarks immediately preceding, is found in Dr. Whewell's own exposition of the law of universal gravitation, which that author thinks may be a necessary truth, though he is not sure upon the point. He says:[1] 'This doctrine was maintained *à priori* on the ground of its simplicity, and was asserted positively, even before it was clearly understood. Notwithstanding this anticipation, its establishment on the ground of facts was a task of vast labour and sagacity: when it had been so established in a general way, there occurred at late periods an occasional suspicion that it might be approximately true only; these suspicions led to further researches, which showed the rule to be rigorously exact; and at present there are mathematicians who maintain, not only that it is true, but that it is a necessary property of matter.' That is to say, the truth is a truth of experience, whose necessity is in proportion to the universality and uniformity of that experience: suspicions of errors or doubts lead to further researches, and when there is established a rigorous uniformity of experience, people begin to maintain that the given proposition is necessary. And this manner of confirmation seems in some measure to meet with Dr. Whewell's approval. He goes on to remark shortly afterward: 'Since every doubt which has been raised with regard to the universality and accuracy of the law of gravitation has thus ended in confirming the rule, it is not surprising that men's minds should have returned with additional force to those views which had at first represented the law as a necessary truth capable of being established by reason alone.'[1] Now this seems to me an admission of just the point I have been arguing. Of all things in the world it would be the most 'surprising,' that any experience whatever should turn men's minds to the necessary character of a truth, unless Dr. Whewell's opinion that these truths are independent of experiences is incorrect and it be the case, on the contrary, that such truths are not merely dependent upon, but are derived from experience. Yet, in spite of this concession, he argues that this law, if it is universally true (of which he is in doubt; how that doubt can be settled on his theory he does not make clear), its universality flows, not from experience, but from the ideas which we apply to our experience, and which are the real sources of necessary truth! To pretend unqualifiedly that we *know* what has not come to pass, or what we have no experience of or testimony upon, is to destroy the distinctive and restrictive meaning of the word *know*, and to abrogate the distinction between presentative and representative cognition. We do not, strictly speaking, *know* what will occur in the future; we *expect*, we *believe*. We do not *know* that the whole is greater than its part to an inhabitant of Mars; we *believe* that it is so, and we cannot divest ourselves of that belief. Why? Because all our experience and all the testimony we can get as to the experience of others, substantiates and establishes the same. A universal truth, therefore, is not to our knowledge any more universal than our experience; further than this, we have only a belief as to the experience of others past, present, and future. Indeed, we have only a belief in our own past and future experience. All this, however, is capable of assertion of a proposition of ordinary generality. We may have, in regard to such, a belief as to its being true outside the sphere of individual experience; and in both cases the strength of the belief is in the ratio of the uniformity and extent of the individual experience. Here then, as also in applying the test of necessity, we find the necessary and experiential truths of Dr. Whewell to be on a par; the universality of the one is of just the same kind as the universality of the other, the difference being solely one of degree, and that degree one of generality. We shall, therefore, be obliged to conclude that there is no foundation for the radical distinction made by the *à priori* philosophers between generality and universality. Attention to the nature of presentative and representative knowledge, and a study of the relations of knowledge and belief, expose the fallaciousness of their argument.

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[1] *Philosophy of Inductive Sciences*, Part I. Book III. Chap. IV. p. 1.

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[1] *Philosophy of Inductive Sciences*, Part I. Book I. Chap. II.

§ 51. We observed a little while ago, that, allowing all our knowledge to begin in experience as admitted by the advocates of an *à priori* origin of some cognitions, we are forced either to the conclusion that necessary truths are a growth from experience, or that they are not strictly universal, either of which is fatal to the *à priori* theory. We now see that the other admission of the intuitionalists, namely, that we have some knowledge whose origin is experiential, leads to the position that the necessity of the truths of experience is of the same kind as that of truths *à priori*, and that the universality of the one is nothing different save in degree from the universality of the other, and that the necessity and universality of both are measured by their generality—which result is contrary to and subversive of the doctrine of a purely *à priori* origin of any knowledge whatever. We have also remarked that to claim all knowledge to be *à priori* infallibly brings us up in absolute idealism or pyrrhonism. We have left then the two hypotheses that all knowledge has its source in experience, or that all cognition has both an experiential and an *à priori* element, and to the consideration of these we will for a moment address ourselves.

§ 52. It is scarcely to be supposed that objection will be raised to the assumption that, granting the latter of these two suppositions, an equivalent statement would be that in every cognition one element is supplied from a source outside the mind and one from the mind itself. This assumption is unavoidable, for allowing a duality of origin to all cognition, and an *à priori* source being one in 'the constitution of the mind,' in order to preserve the duality the other source must be without the mind. And, moreover, in order to make the hypothesis of a dual element available against the position that all knowledge comes from experience, the further assumption is necessitated that experience is a source wholly outside of the mind, and that the mind contributes nothing to an experiential cognition. I have already entered my protest against charging such opinions to the account of the experience philosophy (§ 39) and havé shown by unequivocal language of Locke (§ 39) that the father of that philosophy held to exactly the contrary doctrine. In its baldest form this theory is as absurd as the denial of an objective world, and of which also President Porter might well doubt as he did with regard to the similarly extreme opinion on the other side of the controversy to which we have referred, that it was ever held by 'any sober and considerate thinker.' Yet a great deal of the outcry that has been from time to time raised against the experience philosophy is based upon the assumption that it takes away all activity from the mind and puts it into matter, and that it in reality recognises no mind at all. It will be asked perhaps:—Does not that philosophy derive all our knowledge from sensations; and what are sensations but impressions having their potency from external nature? In reply, it must again be urged upon the student of philosophy to consider diligently the words of Locke. The experience philosophy holds that all knowledge is derived from sensations, representations and associations of sensations, and associations of representations of them. It does not claim that the Non-Ego has anything directly to do with the association of sensations or reproductions of them, nor does it deny a difference between sensations and representations of sensations: rather, it makes this difference fundamental and important, it being no other than the radical distinction between presentative and representative knowledge. It posits sensation from without and reflection from within, as the two ultimate constituents of cognition. And the doctrine of association, so far from assuming the passivity of the mind, simply expresses the laws according to which the mind *acts*. Moreover, in a simple sensation the experience philosophy recognises the duality of elements.

This is evidenced among other ways by the fact that it declares a sensation to be a *feeling*, and the term *feeling* has no relevancy, except on the supposition that there is a *mind* which feels: body has no feeling in a scientific sense. So far as I have been able to learn, those who defend the experiential origin of knowledge have always been willing to allow that a sensation implies mind as much as matter, and that without mind there could be no sensation any more than there could be without matter. And again, the later psychological researches have made out very conclusively that the earliest consciousness arises in connection with feelings of movement, and that when the dawn of consciousness occurs there is action by the mind outward as much as there is action *upon* the mind inward. Therefore, if the *à priori* philosophers mean to say that all cognition involves an element from Non-Ego and an element from Ego having a source outside of and one within the mind, it is only by a wholly unwarrantable perversion of fact that anyone can raise a substantial issue between them and the experientalists. If this be the position of the former, I have no more quarrel with them as regards the origin of knowledge except as to names. Both schools of philosophy can meet upon a common platform.

But if the controversy becomes one of the use of terms, since the designation *à priori* has its sole significance from an exclusion of the Non-Ego, there would no longer be any use for it in describing the origin of knowledge. It could be employed properly and usefully to indicate a method of procedure in thinking, as it was from Aristotle down to Kant; but to introduce it as an appropriate name for a source of cognition would only be, in such an event, making it a means of confusion. If then this term would need to be relinquished, I do not suppose any more appropriate and sufficient designation can be found to give a correct notion of the truth than experience—'Εμπειρία, *experientia*, that which we have tried, that which we have *learned*. We know a thing by experience because we have tried and found it so; in other language, because we have *learned* that it is so. The word *experience* needs no definition, and cannot be defined by any other terms more clear than itself; it points directly to an ultimate and unanalysable fact, in fine to an ultimate *experience* of the human mind.

The writer of the article on Metaphysics in the 'Encyclopedia Britannica' seems to consider that there is less difference between the two great schools of philosophy upon the origin of knowledge than at first might seem; and upon the meaning of experience held by Locke, by which mental life and activity is made as much a matter of experience as the incidents of sensation, the author does not seem to be able to find much fault with the dictum that all our knowledge comes from experience. He propounds as the great question on this subject: 'Are there any modes of human consciousness which are derived, not from the accidental experience of the individual man, but from the essential constitution of the human mind in general, *which thus naturally and necessarily grow up in all men* [1] whatever may be the varieties of the several experiences?' This interrogation he answers in another place in language which bears ample testimony to the truth of the doctrine that experience is mother of all our knowledge, even of the cognition that we have one kind of knowledge or another: 'It is a fact of consciousness to which all *experience* bears witness, and which it is the duty of the philosopher to admit and account for, instead of disguising or mutilating it to suit the demands of a system that there are certain truths which when once acquired, no matter how, it is impossible by any effort of thought to conceive as reversed or reversible . .' [2]

§ 53. We are now in a position to add to what has gone before the somewhat bolder statement that, not only is it true that *Experience is the source of all our knowledge*, but that it is universally and necessarily true; in fact, it is a postulate of as high a warrant as that *A straight line is the shortest path between any two points*. This is evident from the meaning of the term *experience* itself, of which cognition the truth is an explication. If knowledge is a product, as I suppose the *à priori* philosophers will concede, knowing is a process and knowledge is a result of having ideas or cognitions. I am now using the terms *know* and *knowledge* in their general and broader sense. But the having of a cognition is experience, whether that cognition be a sensation, presentation, or a representation, or whatever it may be. Experience, according to Locke, expressly includes mental processes. Therefore, if knowledge is a result of mental processes, it is a result of experience; and to deny that knowledge is such is a contradiction in terms according to the universal meaning attached to *knowledge*. And the same thing is true if knowledge be said to be, not a product but the process itself; for the process itself is experience. All language bears witness to the universality of this truth. All the terms we possess, even the names of the most abstract and general qualities, are derived from and imply experience. Indeed, it has been remarked by philosophers of both schools that all words describing thoughts and feelings were originally used to designate physical phenomena. And though they may have passed beyond the stage of sole relevancy to the external world, they do not emancipate themselves from a reference to and implication of experience. We have seen that experience requires and implies a Non-Ego capable of producing impressions upon an Ego, and an Ego capable of receiving, retaining, and representing them. It is equally true that by these experience is implied. No language, no thought, no proposition, no truth has any meaning at all without these implications. To deny that knowledge comes from experience is to claim that knowledge is independent of a Non-Ego and an Ego, a supposition which is in the highest degree self-contradictory. Indeed, the very name *à priori*, of which so much is made as against the experience philosophy, bears its own testimony in the latter's favour. An *à priori* cognition implies a knower, a knowing, and a known; and these three make experience: so that even if it were the case that we have *à priori* knowledge, our cognition of that fact would be an experience, and by a reference to experience we should have to prove it. Emphatically, then, we may apply to the doctrine of experience the language of Père Buffier before quoted in classing this *par éminence* among the truths, 'si claires que, quand on entreprend de les prouver ou de les attaquer, on ne le puisse faire que par des propositions, qui, manifestement, ne sont ni plus claires ni plus certaines.'

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[1] Italics mine.

[2] Subdivision, *Necessary Truths*. Italics mine.

§ 54. We have thus seen in the course of the sections preceding, that the assertion that man has no knowledge coming from experience, even on the hypothesis that the word experience applies only to sensations as manifestations of an external world, obliges us to deny all external reality; that the position that some of our knowledge is derived from experience and some not, leads to the destruction of all essential distinction between necessary and contingent truths, and is suicidal to the *à priori* philosophy; that the concession that all our knowledge begins in experience is equally so in that it vitiates the complete universality of so-called *à priori* cognitions, or forces a recognition of the experiential doctrine; that the claim that all cognition is both *à priori* and experiential, if established, takes away the distinctive meaning of the term *à priori*, and compels the conclusion that none of our knowledge is independent of experience; that consequently we have left as the only truth, itself ultimate, which will not involve us in contradiction and error, the proposition that all knowledge is derived from experience; and in fine, that this is itself a truth universal and necessary, held by all men, even by those who deny it, and whose contradiction is itself contradictory and absurd. There are other and more indirect arguments which might be employed on the side we have undertaken to defend—*argumenta ad verecundiam*, *ad populum*, *ad ignorantiam* and *ad hominem*. There are also inferior, partial, and derived arguments of a more popular character than those we have brought forward. We might enlarge on these latter, and with more convincing result to some perhaps than would come from the above reasoning which we have found it advisable to employ. But no additional strength would really be derived for the argument from such a course, and this discussion has been prolonged to a length too great to warrant repetition, especially since we have already found some repetition unavoidable. As to the former class of arguments, while it is perfectly competent for the experience philosophy to retort upon its opponents for every hard or contumelious epithet which has been bestowed upon it, and to charge back upon the philosophy of its adversaries all the evil traditions and demoralising characteristics with which it has itself sometimes been charged, such a line of discussion is productive of no good results, but is narrow, undignified, opposed to all true knowledge, a hindrance rather than a help to the honest search for wisdom, and shall find no place here. Accordingly, we will now sum up the main results of the examination which we undertook, in the expository language with which the subject was introduced, namely, that there are truths which are ultimate, universal, and necessary, whose universality is made manifest in the fact that so far as known all men receive them, whose necessity appears in the fact that no man is able to conceive them as otherwise than true without contradiction of his own thought; which are not deducible from other truths; and which in common with all our knowledge are the expressions of cognitions which are formed by and derived from experience. And this, in the measure of the author's abilities, is the solution of the problem proposed at the outset of the discussion.

III.

§ 55. Though we have completed the work contemplated, there are yet some loose ends to be gathered up. There are three or four corollaries to the conclusions reached which can advantageously be set forth, or, perhaps it may be better to say that the conclusions upon which we have felt justified in resting are themselves allied with other and perhaps some more far-reaching generalisations, which latter should also be exhibited in this connection. We will therefore delay in order to make a few remarks, whose justice it is hoped will be sufficiently obvious, but which should be impressed upon the mind of the reader at just this point. First, let us note the fact that necessary truths are a growth. Now, it will immediately be objected to this, that when once apprehended, a necessary truth is just as clear and certain as when entertained in mind for the hundredth time. This may be true, but yet the process of apprehension of the cognition of which the truth is explicative may be a gradual one. Most of our necessary truths are different expressions or explications of notions that have been acquired at a very early period. Cognitions of Space, Time, Matter, Substance, Motion, and Force, are obtained near the beginning of life, and long before the reflective powers have been so far developed as to admit of philosophising about them. New experiences, however, are constantly presenting new aspects of these cognitions, and a particular truth in relation to them may long escape being brought out. But when once it is apprehended, its necessary connection with the notion of which it is explicative is seen, and irresistible connection follows. Yet even in such a case I do not think we can say our conviction is just as strong as if the truth had been before our minds a dozen or a hundred times, for repetition has something to do with strength of conviction. The more familiar it becomes, the more settled it is as part of our knowledge. The most of those truths in affirming which we have no hesitation, are those to which the mind is habituated; while others, equally necessary, are more strange and more difficult of apprehension, and till they become common and familiar they are not so readily accepted. The theorems of geometry are necessary truths, but unless a person is thoroughly conversant with the mode of their connection with fundamental ideas, they may not even be held without a doubt of their accuracy. And the doctrines of the persistence of force and the indestructibility of matter are truths which are developed in the mind only by careful thought. Passing outside the sphere of the individual self, it is still more evident that necessary truths as the property of the race are growths; that time was when some were not known, and that probably the future will reveal more than are now received. Peculiarly is this evidenced by the truths last cited; equally so by the law of universal gravitation, and by the law of chemical combination. Men are all the time adding to knowledge, and thus changing or putting increments to the concepts they have; and whatever by repetition and vividness of impression becomes a permanent part of our knowledge, lays the foundation for necessary truths; and as one man's notions are not another's and as some advance faster and farther than others, necessary truths are exhibited in various stages of the process of becoming universally accepted in their formulation. Those, however, which are most generally cited as examples of such truths, as the axioms of mathematics, seem to have passed beyond the stage of *becoming* everywhere received, and actually are held and acted upon daily by all men. It does not follow from this, however, that they never had an incipiency. It is made an argument against the view that all our knowledge is from experience, that truths (in relation to time and space especially) are received by the mind so promptly and undoubtingly that they could not have their certainty from the harmony of individual experience. That there is some force to this objection I have always been inclined to admit: but it seems strange that men so long failed to take account of the effect of previous experiences of the race. Especially would one have thought that those philosophers who have made so much of the constitution of the mind would have been stimulated to observe how much of that constitution is inherited. If there be anything wanting to completely account for the appearance of necessary convictions in the individual mind, it is fully supplied by the law of inheritance. We are born with a capacity for believing more firmly upon experience a truth to which the minds of our remotest ancestors have shaped themselves, and according to which generations that we cannot number have by all indications lived and acted. In such a condition we find the most common truths of time and space. We cannot trace them back to the period of their beginning, but, so far as we can see, the cognitions upon which they are founded must have taken their rise with the very first intelligence. This being the case, the mind is more readily adapted to spring fast together at once the first associations of its experiences, making them so indissoluble (and there being also an absence of conflicting associations) as to cause them to appear to our minds universal and necessary. That other truths, now less generally received and known, may in process of time attain to the same universal recognition, so as to be in their explicated form (as they are already implicitly) in every man's mind, is not a hazardous prediction. Indeed, human nature may receive such modifications that cognitions not now formed but latent, as germs in the mind, may spring forth, become a part of the mind, and lead to realms of knowledge, of which we have not now the faintest glimmering.

§ 56. Secondly, let us observe that the mind proceeds synthetically and analytically. It may seem to some readers that we have left little or no room for synthetical processes, while it may be asked also—Have we remaining any such thing as knowledge entitled to be called synthetical? The acquisition and generalisation of knowledge is a synthetical process of the mind; the declaration of it is analytical. Every proposition which expresses the formation of an association which indicates a discovery or marks an identification is synthetical; on the contrary, every proposition which unfolds or makes definite a general notion is analytical. If I say, *This is a dog*, the proposition is originally synthetical; so also, if I wish to indicate a new discovery by the expression, *Dogs have heads*; but if knowing that fact already I make the declaration of a part of my knowledge, the proposition is analytical, the very idea of a dog including a head. The minor premisses of syllogisms are characteristically synthetical; the major premisses are analytical. It follows then that the process of arriving at those notions or concepts which are the foundation of necessary truths is synthetical: the truths themselves are analytical expressions of those notions. Dr. Whewell more nearly than any one else of the *à priori* schools reached the correct idea of these truths. His doctrine that they are explications of con ceptions or fundamental ideas needs only slight emendation to make it impregnable; and this doctrine is a great merit of his work. His error lay chiefly in his failure to see how the 'conceptions' of which he speaks are formed. If he had been willing to allow them to be general associations of experiences, he would have placed himself on a road safe and easy to travel. In cognition the synthesis is in gathering up from experience general notions; the analysis is the declaring and unfolding of such notions. That which adds to the intension of a concept is a synthesis; that which declares this intension is analytical. The same expression may at one time be synthetical, as when it indicates an addition to one's knowledge; and at another may be analytical, as when the knowledge thus attained is set forth. All great truths when first discovered were synthetical; the same language, however, indicates an analytical judgment when that which was new has become settled as a part of a general notion; and an expression analytical to one may be synthetical to another, and the converse. In short, properly speaking, it is the process, not the product, which is analytical or synthetical, and these names are applied to the product only to indicate that process. No expression is intrinsically analytical or synthetical. It is the judgment rather than the proposition to which the terms are relevant, though sometimes, to subserve ends of convenience, they are attached to the latter.

§ 57. In the third place it may be remarked, as appearing from what has gone before, that the ground of truth, certitude, and proof is universal agreement. A proposition is true in the proportion that it is in harmony with general experience: it is certain in the ratio that no contradiction is found; and it is proved only as the universal or general harmony is established. Both necessary truth and contingent truth have their foundation and cogency alike in general agreement, the degree of generality marking the difference between the two classes. To ascertain and determine this agreement, the methods of induction and deduction, induction establishing the general principle and deduction extending it to new cases, are the only means competent.

§ 58. A fourth inference from the results of our discussion is of the truth of the great doctrine of the relativity of all knowledge. That Dr. Whewell did not bear this in mind was another cause leading to confusion in his thought. The same difficulty affects most of the *à priori* school. When they say a proposition is *absolutely* true, *necessarily* true, they seem to think they have a truth transcending the very limitations of knowledge itself. Kant's 'strict universality' to him is a universality which he imagines is literally unconditioned. When Dr. Whewell talks about a truth being such that there is no possible exception to it, he thinks he has an absolute universality. Such an attempt at grasping the inconceivable is the source of much that is misleading, incoherent, and inconsequential in the *à priori* philosophy. I do not propose to enter upon an argument here to prove that all our knowledge is relative. Every step that we have taken, however, is substantially an argument for that law. No one has successfully combated Sir William Hamilton on this point; and he has had ample reinforcement from Mr. Mansel and Mr. Spencer. When we say that a truth is necessary we mean that it is relatively necessary; when we declare it to be universal we announce only a relative universality. If not, we claim infinite knowledge and arrogate to ourselves a reach of vision wider than vision itself, and a penetration of intellect deeper than intellect; we claim to know that which knowledge fails to cognise and which the mind itself warns us is unknown. If it be asked then, what is the use of calling any knowledge universal and necessary if none is really so? What meaning have the words?—still, it may be truly said that there are advantages in the employment of these terms amply sufficient to justify their retention. They characterise the highest and most general knowledge we possess, and knowledge sufficiently peculiar and distinctive to demand a special name. No other names are as appropriate, and none so well established in usage. The truths marked by them are the most universal and necessary of any knowledge we have, and so far as we are able to judge, can have. While, therefore, we retain the designations, let us not fail humbly and reverently to concede that there are limits to our knowledge as well as to our action, while as to the future of both we may feel that, 'it does not yet appear what we shall be.'

> 'Full many a secret in her sacred veil
> Hath nature folded. She vouchsafes to knowledge
> Not every mystery. * * * *
> Nor even the things which lie within our hands—
> These knowing, we know not.'[1]

§ 59. The view of the nature and origin of necessary truths taken herein thus brings out into prominence four laws of nature, which are among the very greatest generalisations of science. These are, The Law of Consistency, The Law of Relativity, The Law of Universal Agreement, and The Law of Evolution. The last is the law of the origin of knowledge, the two first are laws of its constitution and limitation, the third is the law of proof. And it is not too much to assert that on these four hang all law and all prophecy.

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[1] Multa tegit sacro involuto natura, neque ullis
Fas est scire quidem mortalibus omnia: multa
Admirare modo . . . .
. . . . namque
In manibusque sunt, haec nos vix scire putandum.
Quoted by Sir William Hamilton; author not known.

§ 60. In parting with the *à priori* philosophers who have been the subject of our criticism, it is but meet to say a kindly word of Dr. Whewell. He has had no successor upon whom his mantle has rested. In the literature of science, he is almost the last of his race; and none greater have followed him in his family of philosophers. He was a man of powerful intellect and great erudition; and came so near that one cannot but feel a deeper sadness that he should have finally missed the complete fulness of truth. His works are of high value to the student and the scholar; the labour that he spent in acquiring the knowledge which enabled him to write them, his patience in elaborating and developing that knowledge should command our profound respect. He has somewhat ambitiously styled what he considered his most important work '*Novum Organum Renovatum*,' thus associating himself with the two great pioneers in the realm of truth and making himself like them, a Moses to declare unto mankind the promised land 'from the Pisgah height of his exalted wit.' But if it be assigning him a lower position, it is not giving him a place destitute of glory when we accord to him, as his chief honour, that he was the immediate forerunner of one mightier than he, who was the superior of Bacon, and who, though considering the civilisation of his times, not so remarkable as Aristotle, nevertheless in the scope and profundity of his knowledge was himself 'wiser than the wisest of the ancients,'[1] and has contributed to the world a body of doctrine not less valuable than that which emanated from the Lyceum.

§ 61. Finally, I cannot avoid a word of reassurance to those who feel that the universal recognition of the experience philosophy will ensure the downfall of morality and religion. It is a paltry way of looking at any subject, when the mind inclines itself to consider fact and truth secondary and fancied or real consequences primary. The only moral, and as I believe, the only religious spirit, is that which says, Let truth prevail though the heavens fall. The mind must be willing to accept what is true though every system of religion were to be overwhelmed, else it fails to be a truly moral or religious mind. For, if there be a

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[1] J .S. Mill, see *System of Logic*, Bk. III. Chap. III., concluding sentence.

God, God is Truth, no less than Love, and to serve the Truth is to serve Him. If then a philosophy is true, however revolutionary it may seem, those who have a fervent and deep concern for the Lord's law, should recognise it and support it as the expression of that law. Following the triumph of truth, morality and religion have always found a safer and surer basis. Ethics has already reached such a foundation in the law of utility and I doubt not all that is valuable in religion, however it be reconstructed, will always be safe and sacred with a philosophy which assumes only to deal with facts, finding that they are facts, arranging them in order and generalising them.

PART VIII.

INTEGRATIONS OF FEELING.

‘Le plaisir est la jouissance actuelle des sens: c’est une satisfaction entière qu’on leur accorde dans tout ce qu’ils appètent; et lorsque les sens épuisés veulent du repos ou pour reprendre haleine, ou pour se refaire, le plaisir devient de l’imagination; elle se plaît à réfléchir au plaisir que sa tranquillité lui procure. Or, le philosophe est celui qui ne se refuse aucun plaisir qui ne produit pas des peines plus grandes et qui sait s’en créer.’—*Anon.*

‘How singular is the thing called pleasure and how curiously related to pain, which might be thought to be the opposite of it; for they never will come to a man together; and yet he who pursues either of them is generally compelled to take the other. Their bodies are two, and yet they are joined to a single head; and I cannot help thinking that if Aesop had noticed them, he would have made a fable about God trying to reconcile their strife, and how, when he could not, he fastened their heads together; and this is the reason why when one comes the other follows.’—Plato, *Phaedo,* Jowett’s Trans.

CHAPTER LIX.

PLEASURES AND PAINS.

§ 1. A PLEASURE is a pleasurable feeling; a pain is a painful feeling. The distinction between feelings, as to their quality, is between their pleasurableness and painfulness, there being an intermediate point of indifference which gives rise to a neutral class. A pleasurable feeling is an ultimate experience of the human mind; so also is a painful feeling. A pleasurable feeling is one whose continuance is desired, and to obtain which action will take place; a painful feeling is one to be avoided, and to escape which action is directed.

§ 2. The question has been mooted whether the pleasure or pain of a feeling *is* the feeling or is another feeling added thereto. It seems to me the former is the more correct view. The determination of the question may depend upon the estimate put upon the indifferent feelings. These latter, though so far from the extremes of pleasure and pain as to mark states of feeling proper to be classed by themselves, are nevertheless in my estimation only relatively pleasurable feelings. The mass of our feeling at any one moment is, on the whole, pleasurable or painful. Since pleasures are relatively great according to the magnitude of the transition from a state of pain; the most marked pleasure follows a previous marked pain. After an exuberance of pleasurable feeling the system calms down into a state of contentment, into a kind of indifferent state as regards the extremes. The whole body of feeling, then, may be characterised as indifferent, though really being a state of pleasure. In this state special feelings may arise which are not sufficiently powerful to disturb the general equanimity, as an emotion of novelty or wonder; the feeling does not have sufficient force to enable us to assign to it a definitely pleasurable or painful character, or it is counteracted and balanced by other feelings. Or again, when there is a powerful disturbing element introduced to affect the state of consciousness there is an appreciable interval when the emotions are changing before the pleasurable or painful character of the associations is fully determined; this feeling of transition, before it passes into a state of recognisable pleasure or pain, is an indifferent feeling, as in surprise, or some powerful impression of novelty. These three cases, I think, will cover all of the indifferent feelings; from them it will appear that the latter are not feelings destitute of a pleasurable or painful character, but feelings so intermediate between extremes of pleasure and pain, or so well balanced by other feelings, that their quality as pleasure is not distinguishable. All that is necessary, then, to produce such feelings is to effect a balancing of pleasure and pain, or a passage from pleasure to pain, or the reverse. So far, then, from the presence of indifferent feelings arguing that pleasure or pain is something superadded to a feeling, it would seem to indicate that one or the other is an intrinsic quality of feeling. The fact that one feeling at one time is the same as at another in all respects save the degree of pleasure which varies, would only prove that on the one occasion there is present a neutralising element of pain which is absent on the other.

§ 3. A state of feeling is not long uniformly pleasurable or painful. There is a continual variation along the scale connecting the maximum of pleasure with the maximum of pain. There is a fluctuation like that of the waves of the sea, and while the general effect is on the whole pleasurable there are frequent interjections of minor pains; so likewise in a state of pain there are momentary or minor alternations of pleasure. A mere change in the quantity or degree of pain or pleasure gives rise to the opposite feeling; it is pain that abates pleasure and pleasure which supersedes and alleviates pain; as one increases the other decreases. In our highest moments of ecstasy painful feelings will often obtrude themselves; the agony of the martyr at the stake is relieved by pleasurable anticipations of joy to come.

§ 4. Whenever the mind is possessed by a pleasurable or painful feeling, intellectual associations are cemented, and the objects intellectually apprehended in connection with the feeling are impressed upon the mind in associated unities. The feeling, when present, is presentative pleasure or pain; subsequently, by the force of association and according to its laws, the intellectual associates of the feeling are recalled, and with them comes back in greater or less degree the feeling itself. We have then a representative pleasure or pain; frequent repetition gives greater permanency, and these representations become a part of the mental furniture. We thus come to identify and describe our pleasures and pains by the associated objects intellectually grasped. We speak of the pleasures of meeting a friend, meaning the pleasure excited within us by seeing and conversing with him. The pleasures of wealth are the pleasures occasioned by having wealth and using it; the pleasures of taste, in the lower sense, are those pleasures excited by tasting. By means, then, of intellectual associations, pleasures and pains are described, defined, separated, integrated, and classified.

§ 5. It is further to be observed that, aside from the intellectual associations, that is, in their capacity as feeling, pleasures and pains differ from each other only quantitatively, not qualitatively. A pleasure, as pleasure, is only greater or less than another. The different kinds of pleasures receive their character wholly from the intellectual attachments; as just remarked, we describe and define our pleasures and pains according to our intellectual apprehension of the objects which are before the mind when the pleasure is present. But inasmuch as the art of living and the development of character depend upon the highest economy of pleasures, a quantitative estimate of them is of the greatest importance. The classifications of pleasures and pains will thus be grouping according to intellectual associations to the end of estimating and establishing their comparative quantitative values.

§ 6. In quantity, pleasures and pains are extensive or intensive. Considered extensively, they are pervasive or enduring, or both. We have then three elements of quantity of pleasures and pains—

1. Pervasiveness,
2. Duration,
3. Intensity.

A feeling may be pervasive, as a shudder, without being long continued or intense; it may have long continuance, as the pain of a small cut not at once healing, but may not be pervasive or intense; or again, as a sharp local pain like a 'stitch in the side,' it may be intense but of short duration, and not pervasive. Or again, these three elements may be mingled with each other in all variations of degree and proportion. Grief or joy may be intense, pervasive, and enduring. As a rule, intensity and duration are in an inverse ratio. The adjustment of the mutual relations of quantity in pleasures will in the future, it is safe to presume, occupy a large share of the attention of psychologists; for upon a basis thus laid rests the whole science of education. To know what pleasures are the most valuable, and in what way they are to be secured, comprehends the problem of educational art and science, which aim at nothing other than revealing and guiding to the attainment of the greatest amount of pleasure which life is capable of affording.

§ 7. The connection between pleasures and pains and volition is not less marked than between the former and cognition. We identify pleasures as objects of desire, and in the proportion that anything is desirable it is pleasurable; whatever is an object of desire is a pleasure; our ends are pleasures, and pleasures are ends of action. Classifications of pleasures and pains will also be determined largely by volitional association.

§ 8. The first notable classification of pleasures and pains was that devised by Bentham, who made fourteen classes of simple pleasures and twelve of simple pains, from which simple pleasures and pains he derived all the others. The simple pleasures are, according to Bentham—(1) The pleasures of sense, (2) The pleasures of wealth, (3) The pleasures of skill, (4) The pleasures of amity, (5) The pleasures of a good name, (6) The pleasures of power, (7) The pleasures of piety, (8) The pleasures of benevolence, (9) The pleasures of malevolence, (10) The pleasures of memory, (11) The pleasures of imagination, (12) The pleasures of expectation, (13) The pleasures dependent on association, (14) The pleasures of relief.

The simple pains are: (1) The pains of privation, (2) The pains of the senses, (3) The pains of awkwardness, (4) The pains of enmity, (5) The pains of an ill name, (6) The pains of piety, (7) The pains of benevolence, (8) The pains of malevolence, (9 The) pains of the memory, (10) The pains of the imagination, (11) The pains of expectation, (12) The pains dependent on association.

Bentham subdivides these classes, and enumerates various pleasures and pains falling within the main divisions and their subclasses. But his classification is a crude one. Scarcely any of his pleasures and pains, beyond those of sense, are in any wise entitled to be called simple; we are not shown what are fundamental and what derived and secondary; the pleasures and pains of association, for instance, would include or be included with most of the other classes, and the pains of privation would also include many of those placed in other divisions. Without making further and detailed criticism of Bentham's classification, we will leave it, having made thus much exhibition of and comment upon it, remarking that it will answer the purpose of a rough grouping until a better can be found, and in certain connections will undoubtedly prove of use.

§ 9. Following the division of feelings according to complexity and degree of integration, pleasures and pains may be divided into Presentative or Real, and Representative or Ideal; and, as in former cases, these two grand divisions may be subdivided into inferior gradations. All the remarks which have been made as to the relations of presentative and representative cognition and feeling may be adapted to pleasures and pains. All pleasures and pains are only relatively real or ideal, every experience containing both the real and ideal element though in different proportions, even that pleasure or pain which is most evidently presentative requiring and containing also representation. Real pleasures and pains are more vivid than ideal: the ideal are susceptible of much variation and reconstruction from the original, and can be very highly refined and cultivated. All ideal feelings have a presentative side as well as a representative. Amongst the most clearly real pleasures and pains are the pleasures of eating a morsel in the mouth, the delight of a present spectacle, the sweets of reposing, exhilarations of exercising, the pain of a fetid odour, or a disgusting taste, the misery of a raging fever, the pangs of present hunger. Among the most evidently ideal pleasures are the recollections of pleasures experienced, the felicitations of love, wealth, prosperity, the anticipations of future happiness; of pains of the same class may be instanced memories of past evils, pictures of woes to come, general discomfort over adversity and unfortunate circumstances. Ideal pleasures and pains pass rapidly into and awaken readily real feelings which are intense, pervasive and enduring. It is a remarkable fact that with the most highly cultivated, representations and the feelings accompanying them will rouse up a mass of present pleasures and pain more engrossing than many original sensations. The only way therefore in which the real can be separated from the ideal is by the intellectual associations. By the amount of feeling—relative vividness and faintness—we can distinguish ideal from real pleasures and pains with tolerable certainty in the one case of recollections of feelings; but even then it sometimes happens that the feeling is reproduced so as to be indistinguishable in quantity from the original real feeling. The term *ideal*, as applied to feelings, has been mainly used to indicate those of this class; but there is no certainty or definiteness in the characterisation of feelings unless we are guided wholly by the relative presentative or representative character of the concurrent cognitions. Inasmuch as reproduced feeling is still feeling, considering feeling alone we should be unable to separate or distinguish. Feelings run into each other, and are lost in a common current. In classifying pleasures and pains therefore according to their reality or ideality, we must follow closely the presentative and representative gradations of the accompanying cognitions.

§ 10. Corresponding to the division of feelings into Peripheral and Central, we may separate pleasures and pains into Sensational and Emotional, the former class including those which accompany sensations, the latter those which belong to emotions. These two classes would further be marked off into the subdivisions of sensations and emotions. We have thus pleasures and pains of the digestive system, of sight, of hearing, of sex, of sympathy, of love, of anger, of fear, of power, of novelty, of revenge, of pity, of grief, of admiration, of esteem, and so forth. This classification is a common one and of great practical value—probably much oftener employed than any other.

§ 11. Pleasures and pains may be divided also into Egoistic, Ego-altruistic, Altruistic. Egoistic are those whose experience does not take in view the pleasure or pain of other persons than the Ego, as the pleasures and pains of eating. Ego-altruistic take into consideration the feelings of others but only as ultimately affecting self—such are the pleasures of benevolence which expects a return. Altruistic pleasures and pains are those which are derived from the purest regard for the pleasure and pain of others, embracing the most disinterested feelings we possess. To these may be added as forming a class of pleasures superior thereto, the æsthetic.[1] Similar to this is Bentham's division of pleasures and pains into self-regarding and extra-regarding.[2]

§ 12. To the various classifications made by psychologists, some of which have now been referred to, I shall venture to add another scheme of arranging pleasures and pains, namely, one having regard in the first place to the preponderance of volitions in given directions, and in the second place to the degree of generalisation and abstraction attained in representing the objects of our chief volitions. According to such a classification pleasures and pains may be divided into three classes, Primary, Secondary, and Tertiary. Primary pleasures and pains are those of the fundamental appetitive sensations;[1] secondary pleasures and pains are those attached to the immediate objects, concrete or abstract, through which the individual considers that he has secured and expects to secure the primary pleasures and pains; tertiary pleasures and pains are those attached to the most general and abstract notions of what are regarded as causes of pleasures and pains. The following chart will exhibit all the principal groups of the first and some of the principal groups of the other divisions.

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[1] Herbert Spencer, *Classification of Sentiments*, *Psychology*, Vol. II.

[2] *Principles of Morals and Legislation*, Chap. V.

I. *Primary Pleasures and Pains.*

Real and Ideal.	Real and Ideal.
Pleasures of—	*Pains of—*
Structural and Functional Integrity (High nervous vitality,—Health).	Disintegration and Prostration (Disease.)
Light and Heat,	Darkness and Cold.
Respiration,	Suffocation.
Movement and Exercise,	Inaction and Inability to Move.
Repose,	Irritation, Restlessness.
Repletion and Digestion,	Hunger and Thirst.
Sexual Gratification,	Sexual Denial.
Society,	Solitude.

II. *Secondary Pleasures and Pains.*

Section First.—Pleasures and pains of material objects around which are clustered in association the Primary pleasures and pains in varying relations; as clothing, weapons, air, fires, bread, wine, books, etc.

Section Second.—Pleasures and pains of actions or states which are directly conducive to securing primary pleasures and pains; as defence, temperance, intemperance, riding, walking, embracing.

Section Third.—More representative pleasures and pains; as of freedom of movement, restraint and captivity, occupation, idleness, security, aggression, cowardice, regularity and harmony in our surroundings, irregularity and mal-adjustment.

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[1] See Chap. XXX. Sec. 36.

III. *Tertiary Pleasures and Pains.*

Pleasures of—	*Pains of—*
Knowledge,	Ignorance.
Power,	Impotence.
Wealth,	Poverty.
Good Repute,	Bad Repute or Obscurity.
Good Character,	Bad Character.
Social Order, Liberty and Prosperity,	Anarchy, Despotism and Ruin.
Heaven,	Hell.

§ 13. We have heretofore, in treating of states of feeling, exhibited the principal groups of sensations and emotions. In speaking now of pleasures and pains, I shall make use of the above classification, and the same will receive what explanation and illustration may be desirable in the three following chapters. It will be proper, however, before proceeding to a detailed exposition of pleasures and pains according to this method of arrangement, to make two or three remarks upon its general features. And first it should be noted that the primary pleasures and pains are at the foundation of all the others. Food and drink are nothing except as they satisfy hunger and thirst; beyond wealth we look to the comforts wealth brings, or to the pictures of possible comforts. Skill is valuable as it enables us to obtain exercise, repose, repletion and other primary pleasures. The greatest power which human beings can reach brings them no enjoyment different in kind from those possessed by the humblest slave. It does not follow, however, that refinements of pleasure are not to be desired, nor that the pleasures of the savage are of no less worth than those of the enlightened. As cultivation progresses highly representative pleasures have, it is true, far more value to the individual and come to be ends in themselves, but they are none the less representative of primary pleasures for all that. However disguised, transformed, reconstructed and idealised, we neither have, nor so far as can be seen can have, any pleasures which are not based upon modifications of and which do not derive all their meaning from bodily integrity and vitality, light and heat, air, exercise, repose, repletion, society and sex. Nor have we any pains not similarly connected with the opposites of these. 'The poor and the usurer meet together; the Lord lighteneth both their eyes.'[1] 'Vanity of vanities, saith the Preacher, vanity of vanities; all is vanity. What profit hath a man of all his labour which he taketh under the sun? One generation passeth away and another generation cometh; but the earth abideth for ever. The sun also ariseth and the sun goeth down, and hasteth to his place where he arose. The wind goeth toward the south and turneth about unto the north; it whistleth about continually and the wind returneth again according to his circuits. All the rivers run into the sea, yet the sea is not full; unto the place from whence the rivers come they return again. All things are full of labour; man cannot utter it, the eye is not satisfied with seeing nor the ear filled with hearing. The thing that hath been, it is that which shall be; and that which is done is that which shall be done; and there is no new thing under the sun.'[2]

§ 14. In the second place it is to be observed that running through all pleasures and pains is the distinction between those relatively real and those relatively ideal. In the primary pleasures (and pains also) we come nearest to the original presentative experience; representation may be found here in less degree than elsewhere; on the one side we may have the actual presentative sensational experience, as the pleasure of present warmth; on the other side we may have a representation of the pleasures of warmth as they are recollected, reproduced, and thus idealised. Passing to the second division, the pleasures and pains there found are all in a higher degree representative; but here also there is a relativity of reality and ideality. The pleasure of seeing an article of food is a representative pleasure, dependent upon associations between the consumption of such food and a feeling of repletion: but the thought of articles of food not present gives a pleasure still more ideal. The feeling of present security, from the circumstances of my position, is representative; the feeling accompanying thoughts of security irrespective of my present condition is still more so. In the third great division, the pleasures and pains are very highly representative; but there is a variation among these. The pleasures of wealth may be represented pleasures attached to the possession and consumption of wealth in my past experience, or in the experience of others with which I have acquaintance, or of all men in time past; or again, they may be pleasures derived from abstract and ideal creations of the mind, in these various cases exhibiting varying degrees of reality and ideality. The pleasures of heaven may arise from the transference to a future state of specific pleasures actually experienced in the past, or may be those accompanying the most exalted and elaborate creations of the imagination. The pleasures of social liberty may, in like manner, accompany more simple representations of experienced freedom, or may be those attached to an ideal creation of a perfect social state.

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[1] Proverbs of Solomon, Chap. XXIX. 13.

[2] Ecclesiastes, Chap. I. 2-9.

§ 15. A third remark to be made is upon the complex union and interference of pleasures and pains. As to the former specifications the primary are more simple, but even among these the simplicity is only relative. The pleasures of air and exercise are blended; respiration is itself a variety of exercise. The pleasures of society and sexual gratification are closely allied. There is a connection between repletion and repose, and between hunger and irritation; while the pleasures of integrity and nervous vitality may be considered to have a part in all the others. In the higher divisions the same fact is noticeable in a more marked degree. The pleasures of occupation imply those of freedom of movement; the pains of want of necessaries are associated with those of insecurity. The pleasures of wealth are made up largely of those of power and the converse; the pains of ignorance carry with them sometimes in association the pains of poverty. The pleasures of heaven are a vast complex of other pleasures; so also of corresponding pains are made up the pains of hell.

In like manner interference is frequent and characteristic. The pleasures of repose may be detrimental to and subversive of those of exercise; those of sexual gratification to those of heat; those of aggression and conflict of those of security; the happiness of those about us to pleasures of food and drink, clothing and fire; the presence of the opposite sex to occupation. Knowledge may be opposed to health, wealth to knowledge; good character may even be hostile to good repute; and always social order and liberty are at the sacrifice of some individual and egoistic pleasures.

§ 16. It may perhaps excite the wonder of the reader that no place is apparently provided for the æsthetic pleasures. The deficiency is not, however, more than a seeming one. Æsthetic pleasures may arise in connection with any of the pleasures enumerated, but there is no fixed class of æsthetic objects. Beauty may be seen in and around all objects which excite pleasure or in representations of them. The ideal pleasures of the first, second and third order include all the æsthetic delights. Anger is a pleasure, but there could be made no class of objects of anger; the emotion arises in consequence of and auxiliary to certain appetites. Æsthetic emotions are those which spring forth upon the ideal contemplation of certain objects which are associated with the satisfaction of volitions. Beautiful objects are those which evoke æsthetic emotions; these latter are sublimated ideal pleasures, primary, secondary and tertiary, belonging to all three of the grand divisions and peculiar to no one of them.

§ 17. The fact that indulgence of pleasures of one sort is often at the expense of other pleasures leads to the association of pleasures of one description with pains of another, so that under one name both are recalled. We are accustomed to speak of the pleasures and pains of knowledge or wealth, associating together under the term *knowledge* those pleasures which knowledge brings and the pains resulting from the crowding out of other pleasures, as those of health for instance. But what we really have in such case is not pains of knowledge but of disease; there occur in conjunction pleasures of knowing and pains of disintegration of the body. We might speak of the pleasures and pains of security in like manner; the signification of our language being the pleasures of security and the limitation of the pleasures of freedom of movement, or in other words the pains of restraint. Conversely, were we to refer to the pains and pleasures of restraint we should mean the pains of restraint and the pleasures of security. While, therefore, pleasures and pains are continually checking each other and are so associated as to be clustered around the same objects, it will be well for us to keep distinct the causes both of the one and of the other.

§ 18. A comparison of the table of primary pleasures and pains with the classification of peripherally-initiated feelings given in an earlier part of this work (Chap. XXVI.) will show the one last mentioned to be really the foundation of the other. Our primary pleasures are the ultimate sensations of organic life and representations thereof. The five senses are ministers of organic life. Taste and smell are subservient to alimentation; their pleasures and pains are all attached to those of appetitive cravings which have been enumerated; touch is equally so, being associated closely with the muscular system. In like manner the pleasures and pains of hearing can be referred to repose and irritation, prostration and vitality, sex, alimentation, society, etc. So of the pleasures and pains of sight. That the sensations of the five senses are not ultimate but only accessory is evident from the fact that the senses can be abrogated and yet life continue, except in the case of touch, which cannot be dissociated from muscularity. By means of sight, and to a less degree by means of hearing, intellectual pleasures and pains are developed to a far greater extent than by any other sensibilities. Some of the pleasures of light may be referred to the sense of sight, but others with those of heat are more correctly traced back to sensations of the general system and the nervous system. The pleasures and pains of society are joined with those of sexual gratification, but for reasons which will hereafter be given, it is thought advisable to afford them a department by themselves.

CHAPTER LX.

PRIMARY PLEASURES AND PAINS.

§ 1. IN the classification of pleasures and pains just presented it is not claimed that a complete list is given, or that the best grouping is made that can be made. The attention of psychologists has been comparatively little devoted to the emotional department of mind. While treatises upon intellect have been abundant, and while the process of cognition and the nature of cognitions have come within the purview of philosophy in all ages, the subject of feeling has been neglected. Few have attempted a thorough study or made an elaborate survey of the feelings. Accordingly science, so far as it relates to pleasures and pains, sensations and emotions, is lamentably defective. Moreover, this branch of mental science is an exceedingly difficult one. No phenomena of the mind are so perplexing, from the vast multitude and variety of facts to be considered, as are the feelings. They are so complex, so blended and interwoven, so subtle, so indefinable; they are not susceptible of analysis, and scientific co-ordination, in as satisfactory degree as are cognitions. The sources and springs of feeling lie so far back that we have great difficulty in arriving at them. So little is known of the early development of mind that we cannot be sure of a correct estimate of what now is, when the present is explicable only in the light of a past of which we are ignorant save to a relatively small degree. But while in contemplation of the vastness of the field and the possible fruits of long and patient research in the study of the feelings which the future seems to promise, our own results appear meagre and crude, yet what is now offered may be perhaps a step in advance and may furnish some little aid to future explorers. To prepare an adequate exposition of the feelings and the products of feeling would require the labour of a lifetime, and the book which should contain it would be of encyclopedic dimensions. In these chapters no more can be accomplished than to survey the fields for others to labour therein.

§ 2. Though little has been achieved in the way of unifying scientifically our knowledge of pleasures and pains, we are by no means lacking in descriptions of them. Literature is full of varied and wonderful delineations of the pleasures and pains of life, so that in poetry, history and fiction, the psychological inquirer can find the richest material for his study. He has no need to make entirely new observations and record them. Largely the observations have been taken and the record made by the great masters of fiction, by the brilliant geniuses of poetry and by the sober chroniclers of the lives of men and nations. We can turn to the books of the Bible, the dramas of Shakespeare, the poems of Homer and Dante, the pages of Dickens, Thackeray and Bulwer, to the annals of Herodotus and Thucydides, of Allison, Gibbon, Prescott, and Motley, to the biographies of Plutarch and the Memorabilia of Xenophon, to find illustrations and exhibitions numerous and accurate of the pleasures which eager human nature has pursued and the pains by which it has ever been chilled and baffled. The 'heavenly goddess' of poesie sings of 'woes unnumbered' as those of which Achilles' wrath was 'the direful spring;'[1] and anon of joys which are—

> 'a perpetual feast of nectared sweets
> Where no crude surfeit reigns.'[2]
>
> 'Wishes rising!
> Thoughts surprising!
> Pleasure courting!
> Charms transporting!
> Fancy viewing!
> Joys ensuing!'[3]

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[1] *Iliad*, Book I., Pope's Trans. [2] Milton, *Comus*. [3] Addison, *Rosamond*.

He who sets forth the deeds of past years and centuries reveals to us 'scenes of disaster and bloodshed, battles, sieges, executions, deeds of unfaltering but valiant tyranny, of superhuman and successful resistance, of heroic self-sacrifice, of fanatical courage and insane cruelty;'[1] and again the delights with which a whole people is intoxicated and beside themselves, as when, on the accession of William and Mary, 'during three weeks the gazettes were filled with accounts of the solemnities by which the public joy manifested itself, cavalcades of gentlemen and yeomen, processions of sheriffs and bailiffs in scarlet gowns, musters of zealous Protestants with orange flags and ribbons, salutes, bonfires, illuminations, music, balls, dinners, gutters running with ale and conduits spouting claret.'[2] And we recognise as equally true and faithful representations of psychological facts in the engrossing pages of the storyteller, the wretchedness of the Dedlock house,[3] the horrors of Sykes' flight and the scene which preceded it;[4] the final blessedness of the life of Esther, her guardian and her husband in Bleak House when her narrative closed, or the comforts of Oliver Twist at Mr. Brownlow's, or again in bolder fiction the rewards of virtue and pure-mindedness as when after his perilous journey on the Golden River, before little Gluck as he gazed upon the Treasure Valley 'fresh grass sprang beside the new streams and creeping plants grew and climbed among the moistening soil. Young flowers opened suddenly along the river sides as stars leap when twilight is deepening and thickets of myrtle and tendrils of vine cast lengthening shadows over the valley as they grew. And Gluck went and dwelt in the valley, and the poor were never driven from his door; so that his barns became full of corn and his house of treasure. And for him the river had, according to the dwarf's promise, become a river of gold.'[5] Thus for all shades and varieties of pleasure and pain, may the student resort to the boundless wealth of the mines of literature, fictitious, poetical, historical, scientific; and though original observation is not thereby made of no value, but must still be pursued with ever-increasing care and skill, and though the gold of literary fields must be quarried, picked out of veins in the mass of unproductive material, or sifted from the worthless sands, yet preserved in written record the psychologist has a testimony to the character and constitution of the human mind as reliable and now almost as indestructible as the strata of the tertiary, the mesozoic, the palæozoic and the azoic, which bear witness to the structure of the earth and the evolutions of life.

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[1] Motley, *Rise of the Dutch Republic*, Vol. II. p. 98.

[2] Macaulay, *Hist. of England*, Vol. III. Chap. XI.

[3] Dickens, *Bleak House*.

[4] Dickens, *Oliver Twist*.

[5] Ruskin, *King of the Golden River*.

§ 3. The pleasures and pains which are the subject of this chapter include those arising in connection with the appetites and some not usually reckoned as appetitive. The appetites usually considered are sleep, exercise and repose, hunger and thirst. I am not disposed to regard these, however, as exhausting the appetitive cravings of human nature. There seems no good reason for excluding the periodic demand for respiration from the list of appetites. Defæcation is another appetitive agency not usually counted as such. But without entering upon the further discussion of appetites, we can remark that among the primary pleasures and pains are located the basic feelings of the mind. The pleasures seem to have relation to three general functions, (1) Growth; (2) Preservation of the integrity of the mind and body; (3) Reproduction; correspondingly the pains have relation to (1) Retardation, (2) Disintegration, (3) Annihilation. The pleasures of the mind are (1) to acquire, (2) to possess and conserve, (3) to perpetuate. Whatever pleasure we have may be found susceptible of reference to one or more of these three heads; the pains have a negative bearing on the same ends. With this general remark, we will proceed to a specific (though somewhat brief) exposition of the groups before named.

INTEGRITY OF STRUCTURE AND FUNCTION.—DISINTEGRATION AND PROSTRATION.

§ 4. I here include comprehensively the pleasures of health and the pains of disease. These pleasures are known to us in a high degree by the pains which disintegration and prostration bring. We will consider first the feelings more directly related to structure, then those of function. Were we always whole, we should not appreciate the pleasures of bodily perfection. The pleasures of this class are pervasive and enduring, but seldom acute or intense; the corresponding pains, however, are acute very frequently, sometimes massive and pervasive, and more or less enduring according to circumstances. The characteristic pain is that of a wound or fracture; we may also note the pains derived from the loss of limbs or members, sores and ruptures of the flesh, and internal lesions of all varieties. Associated with the pleasures of bodily integrity are the pleasures of facility of movement which is hindered by affections of the organs or made impracticable by loss of them; air, the respiration of which is interfered with by consumption and kindred diseases, and regularity of function which is dependent upon unimpaired organs. Among the associated pains attached to those of disintegration are those of cold, resulting from the loss of animal heat, of suffocation from inability to respire, of prostration from general failure of vitality, of inaction from injury to the organs of movement, of irritation and of fever. To these may be added some of the pains of failing mental powers, confusion, weak memory, peevishness, idiocy and insanity.

§ 5. We can find the most thoroughly realistic descriptions of the pains of impaired bodily structure in the medical and surgical reports of hospitals or of army cases in time of war, such as are published by the War Department of the United States, and as appear in the 'Medical and Surgical History of the War of the Rebellion' (Washington, 1876). From the latter work I extract the following, which may be taken as a specimen of the infinite variety of cases that might be referred to in the annals of many wars:—

'*Case* 333. Private J. W. Vogus was wounded by a Minié ball. . . . The ball passed through the right side of the body. . . . On June 8, while he was endeavouring to rise in bed, there was a sudden gush of bile from the anterior opening to the extent of half a pint, in the nurse's estimation, after which time until June 25 the quantity was about equal each day, and flowed constantly and slowly after this period, the bile being mixed with an offensive sero-purulent fluid. . . . tongue covered with a whitish fur; stools nearly white in appearance and very offensive . . . appetite poor . . . he craved acids, and had a disgust of meats of all kinds. He was in a state of constant hebetude; he was peevish and very easily annoyed. His digestion was bad when meat or fatty substances were eaten; often they would be ejected or would pass undigested. . . . His countenance was sad and sunken, and he became emaciated very rapidly, being reduced almost to a living skeleton; . . . I do not remember seeing him laugh once, or even indulge in a smile, the two months he was with us.'[1] This quotation illustrates not merely some of the pains of impaired physical organism, but also shows the inseparability of those pains from associated pains. We have depicted here not merely the specific pains sought to be illustrated, but pains of disordered function, of thirst, irritation, disgust, indigestion and prostration. In this case the primary cause was laceration of the skin, flesh, and internal organs by the passage of a ball through the abdominal cavity; the pains resulting were a congeries of associated ills. In us who read there are raised the emotions of sympathy, disgust, and horror.

§ 6. In the Old Testament book of Leviticus,[2] some vivid descriptions are given of the symptoms of leprosy which illustrate the real and ideal pains of that loathsome disease. Those mangled by wounds, those suffering from leprosy and syphilis furnish probably the extreme cases of bodily disintegration with its attendant pains. It must be remembered, however, that what appears most frightful and horrible to a spectator is not necessarily the most painful to the sufferer; the skilled looker on is, however, ordinarily a better judge than the invalid of the extent of physical deterioration.

§ 7. While to the scientific and accurate observer, a faithful plain setting forth of the facts which explain and constitute the particular lesion which is a subtraction from integrity of the organism, presents most effectually the immediate pains thereof, to the generality of people more ideal and highly coloured delineations appear with greater force, owing largely to the circumstance that, by giving an æsthetic character to the emotions excited, a pleasurable element is introduced, subduing and overmastering the painful. Were this not so, we could not be persuaded to dwell upon thoughts of agony and sorrow; we should dismiss them at once from our mind; but if we can keep back the disagreeable and nauseating, and can bring forward associations which carry with them pleasure of some sort, we will allow ourselves to dwell upon the picture. Indeed, there is a similar pleasure to the man of science in reading a scientific description. There is an order, beauty, and joy even in disorder, ugliness, and pain. 'The Leper' of N. P. Willis is a charming and fascinating portrayal of the real and ideal pains of bodily disease.

> 'It was noon,
> And Helon knelt beside a stagnant pool

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[1] Part II Vol. II. p 142.

[2] Chap. XIII. *et seq.*

In the lone wilderness and bathed his brow
Hot with the burning leprosy, and touched
The loathsome water to his fevered lips.'

With a skill which shows the poet to have full knowledge of the greater charm of a pleasure which succeeds great pain, in the closing verses of his poem he makes vivid by contrast the joys of restored integrity, when the Saviour heals the leper—

'Stooping down,
He took a little water in his hand
And laid it on his brow and said, "Be clean!"
And lo! the scales fell from him, and his blood
Coursed with delicious coolness through his veins,
And his dry palms grew moist, and his brow
The dewy softness of an infant's stole.
His leprosy was cleansed, and he fell down
Prostrate at Jesus' feet and worshipped him'

The same author in 'Parrhasius' gives a life-like picture of suffering in the victim and savage joy in the brutal artist who tortures him.

Works of the character of Fox's 'Book of Martyrs' are full of exhibitions of the subject we are now considering. Battle scenes and descriptions of carnage are somewhat suggestive, though commonly in these the painful and distressing are kept back, while the interest is centred upon the victory and the glorious power which achieves it. An anonymous poem, entitled 'The Sea Fight,' is graphic in its representations of horrors—

'Gun bellows forth to gun, and pain
Rings out her wild delirious scream!
* * * * *
The slippery decks send up a stream
From hot and living blood, and high
And shrill is heard the death-pang cry.
The shredded limb, the splintered bone,
The unstiffened corpse, now block the way.
* * * * *
* * * * Distraught
And smeared with gore, about they run
Then fall and writhe and howling die!'

Dante's great poem is full of instances of torment; but Dante's descriptions of pain I never have been able to regard as being of half the effectiveness that they might have been invested with had they been more subtle and suggestive and less gross and coarse; they are sometimes almost ludicrous. For instance, one is amused rather than horrified by his statements relative to the wretches imprisoned with feet upward in convenient posture for a bastinado; and even the fearful feast of Ugolino is not made so impressive as it might have been if described with more minuteness of detail in a more refined and more artistic manner. In connection with these illustrations of the pains of abrasion and destruction of the body, the classical scholar will not fail to recall the Homeric account of the punishment of Irus by Ulysses, in the 'Odyssey,' or of Thersites, in the 'Iliad.' The battle scenes of the latter poem, as in the fourth, fifth, eighth, thirteenth, fourteenth, and sixteenth books, also furnish abundant examples. And in contrast with the restrictions, the irritations, the agonies of physical degeneracy, we delight to dwell upon the poetic descriptions of perfection to the gods and heroes. Homer's hymn to Apollo is one of the most grand of these, though rather by subtle implications than by direct reference is the manly strength and beauty of the deity made apparent; some passages, however, elicit representative pleasures by their direct allusions:—

'I will remember and express the praise
Of heaven's far-darter, the fair king of days;
Whom even the gods themselves fear when he goes
Through Jove's high house; and when his goodly bows
He goes to bend, all from their thrones arise
And cluster near to admire his faculties.

* * * * *

And then forth brake
The far-shot king like to a star that strows
His glorious forehead where the mid-day glows
That all in sparkle did his state attire,
Whose lustre leaped up to the sphere of fire.

* * * * *

Then like the mind's swift light again he flew
Back to the ship shaped like a youth in height
Of all his graces; shoulders broad and straight
And all his hair in yellow curls enwrapped.'[1]

§ 8. There are some pains associated with the pleasures of bodily integrity, though probably fewer than are attached to any other pleasures. We notice them in cases where the pleasure is attained by the sacrifice of something. Ambition for wealth or power, as has been stated, may come in direct conflict with the pleasures of strength and health. If the objects of dear aspiration be lost, though physical perfection be gained, there will be pangs of regret sometimes forcing themselves upon the attention. The soldier who saves life or limb at the expense of honour will often have remorse and shame dulling the edge of what would otherwise be unalloyed pleasures. Would it not have been a prime dissatisfaction to François to have escaped entire and lost the packet which was to prove Richelieu's salvation? Would Horatius have enjoyed his wholeness had he abandoned the bridge and obtained his own safety? Would Napier, had he protected himself at Casal Novo, have valued his immunity from wounds as compared with the glory he might thereby have lost? To the generous, noble nature of Mary Lovell Pickard would there have been no stings of reproach had she remained away from the sad scenes of Osmotherly, where her help brought relief and life to the fever-stricken, though by her absence she had secured a longer lease of unbroken health and strength? In like manner, where a triumph of knowledge is to be achieved, the student will often be conscious that he would prefer to lose limb, health, strength, sometimes even life, rather than secure these and relinquish the object of ambition. The fond mother counts as nothing her sleepless toil, the wearing of the flesh, and the wearying of the brain for her dear ones. And if in any of these cases, in a moment of temptation, self-preservation asserts its claims, and its pleasures are gained with the sacrifice of what has been considered more valuable, none of its sweets are without the bitter of regrets for the lost opportunity and the fruits which a greater effort, a more staunch courage, might have guarded.

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[1] Chapman's Trans.

'I bade thee grasp that jewel as thine *honour*,
A jewel worth whole hecatombs of lives.'[1]

§ 9. With the pains of physical disintegration there are pleasures too. The delights of ease and repose, freedom from the cares of activity sometimes furnish compensation. The man who has lost a leg is spared the fatigue of running races; he whose eyes are gone suffers not from the toils of ceaseless and eager watching. And in the proportion that we are made helpless by our infirmities we often gain in those amenities which fall to the lot of the sick. Pity, tenderness, smiles and favour come to the weak and maimed when they pass by those who are in the full tide of their powers and graces. The pleasures of repose and of society are associated with the pains of bodily defects and deterioration. These are not, however, a full equivalent to the pleasures of integrity; but, so far as they go, they are a mitigation of the ills which attend its absence. Wisely said Menander, 'There is no good in life, which grows like a tree from a single root; but also there is some evil which is nearly united with it; and, on the other hand, nature brings the good from the evil.'[1]

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[1] Bulwer, *Richelieu.*

§ 10. In this connection may be mentioned also the pleasures of youth and the pains of old age. The buoyancy of the former, its freshness, vigour, overflowing energy and vitality, give inspiration, hope, and joy. A stanza from Gray's 'Ode on a Distant Prospect of Eton College' gives a very good illustration of the pleasures of youth as affected more directly by strength and wholeness of body:—

'Gay hope is theirs by fancy fed
Less pleasing when possest;
The tear forgot as soon as shed,
The sunshine of the breast:
Their's buxom health, of rosy hue;
Wild wit, invention ever new;
And lively cheer, of vigour born;
The thoughtless day, the easy night;
The spirits pure, the slumbers light,
That fly the approach of morn.'

On the other hand, among the vast multitude of descriptions and portraitures of the sorrows and inconveniences of old age, perhaps none more forcible can be selected than the familiar passage from the last chapter of Ecclesiastes, with its rich imagery: 'Remember now thy Creator in the days of thy youth, while the evil days come not, nor the years draw nigh, when thou shalt say, "I have no pleasure in them;" while the sun, or the light, or the moon, or the stars, be not darkened, nor the clouds return after the rain; in the day when the keepers of the house shall tremble, and the strong men shall bow themselves, and the grinders cease because they are few, and those that look out of the windows be darkened, and the doors shall be shut in the streets when the sound of the grinding is low, and he shall rise up at the voice of the bird, and all the daughters of music shall be brought low. Also when they shall be afraid of that which is high, and fears shall be in the way, and the almond tree shall flourish, and the grasshopper shall be a burden, and desire shall fail.'

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[1] *E Plocio*, p. 156.

§ 11. When the bodily organs are entire, the blood circulating freely, and all the functions being performed with regularity and completeness, and especially in the vigour of youth or early manhood, when there is no depressing or disturbing cause present, a man sometimes feels a sovereign contempt for the reputed ills of life, and esteems himself a power sufficient to move earth and Heaven. A consciousness of strength is in him, a joyous elation fills his soul, cheerfulness lights his countenance, and he feels life a blessed and happy experience. Such is the pleasure of high functional vitality. On the other hand, if there be a lesion of organs, or an interference with proper functions, or if the overflow of youthful spirits has subsided, there may come a weariness of the flesh, a feeling that it is necessary to husband one's resources, a consciousness of failing powers, inducing sadness, melancholy, lack of energy, diffidence, or, in extreme cases, tremulousness of the organs of movement, failure of memory, hysteria, and hypochondriasis. Such is the pain of prostration.

§ 12. The pleasures of functional vitality are (if it were possible) more intimately and universally connected with all pleasures than is any other group. In truth nervous vitality and pleasure itself seem to vary concomitantly, and there is no little question to be raised as to whether we have a right to form a separate class under which to place these pleasures. It may be claimed with no little justice that when we are speaking of the pleasures of vitality we are descanting upon the pleasures of pleasure. While functional vitality is not pleasure yet the two rise and fall together. In justification of the course here taken it may be replied that while all pleasure implies some vitality there is a distinguishable delight from a general nervous elation and a corresponding pain from a diffused nervous expression and exhaustion. A person may cut his finger and feel pain, while his general vitality is high; and if there be a diminution of that vital force it is attributable directly to the bodily disintegration. A sunbeam breaking through the cloud may give pleasure from the increased glow it develops in the system; but the nervous vitality may be considerable before the sunbeam comes, and what is added is ascribed to light and heat. A deep inspiration of pure air may send through the frame a thrill of happiness in addition to the contentment which may prevail before. So when there is either a high or low state of functional vitality throughout the system, there may be distinguishable pleasures of integrity, light, respiration and corresponding pains of disintegration, darkness, and suffocation. But since nervous vitality is concerned in all these pleasures and pains, it is desirable to ascertain as definitely as possible what marks the same from these other feelings. It has two constituents: one the pleasures which we are not able or do not assign to a definite cause, the other the general result of the blending of all pleasures and pains. The general happiness which comes from unobstructed performance of function in the body, much of which performance we cannot observe, and the general level of pleasure maintained by the concourse of all pleasures, less the reductions of all pains—in these two we find the pleasure of functional vitality. It is not a pleasure of perfect structure, though it depends in a degree upon structure; it is not the pleasure of light and heat, though light and heat contribute to form it; it is not the pleasure of respiration, though if respiration be not free and unimpeded it does not subsist; it is not the pleasure of exercise and movement, though exercise and movement give it its food; it is not the pleasure of repose, though without repose it cannot live; it is not the pleasure of repletion, though by repletion it is brought to a higher degree; no more is it the pleasure of sexual gratification and society, though enhanced sometimes by them. It is the sea into which the rivers flow, which is not those rivers, but which is formed by them, and which again returns into them and without which there would be no rivers, and which without the rivers would not itself be. It is possible (I do not know but probable) that an identification may be made of nervous vitality with light and heat. It is to be observed that as fast as science by its eliminations and condescensions unifies and simplifies the principles of life and knowledge, equally can there proceed a simplification of the primary pleasures and pains; and very possibly in the progress of such a simplification we may be spared the necessity of a separate class for the pleasures of light and heat, the pains of darkness and cold. It is wise, however, not to simplify too much, great confusion frequently resulting from too eager a haste in unifying things in classification, the grounds of whose unity are not clearly evident and which in reality may not be susceptible of identification at all.

§ 13. It would seem that the pleasures of functional vitality have the closest associations with those of integrity of structure and the pains of prostration with those of disintegration. This arises from the interdependence of structure and function. If the organs are impaired, the functions are disturbed, and if the functions are obstructed, disintegration of the structure follows. Thus the pleasures of youth and the pains of old age which have just been illustrated might with equal propriety receive a place here. When 'the keepers of the house shall tremble' and 'the grinders cease because they are few'; 'they shall be afraid of that which is high and fears shall be in the way . . . and desire shall fail.' Both the pleasures of integrity and nervous vitality (and their correlated pains) are very general in their range, and in this there is another element of correspondence between them. The joys of light and heat, respiration, exercise and repose, repletion and sexual gratification, concern more special functions though they are all associated with functional vitality. The pleasures of society introduce again pleasures of greater scope; and these are also connected with the group now under consideration.

§ 14. The typical pleasure of functional vitality is that of elation or cheerfulness; the typical pain of nervous prostration is depression or melancholy. Another phase of these pleasures is indicated by the term 'repose of strength'; its related pain in the irritation and uneasiness of impotence. Among the ideal pleasures are the emoluments and advantages which energy brings; the joys of success, power, wealth, skill, health, all pleasures in fact. The pleasures and pains of this class are more distinctively pervasive than intense, though intensity is not wanting in the extremes.

§ 15. The pains associated with nervous vitality are mainly those which are brought about by the too great confidence which nervous elation may inspire. The heedlessness and impetuousness of youth are the causes oftentimes of misery. A want of forethought is apt to prevail where the spirits are exuberant, and many a person learns to his cost the necessity of saving his strength, and sometimes learns the lesson too late. That the pains caused by too great confidence in an enduring and all-potent vitality are remote and very representative associated pains of nervous strength, needs scarcely be remarked. With nervous prostration are associated some of the pleasures of society, and those alleviations which sickness and weakness generally are wont to bring. There is no state of prostration short of death itself where some of the pleasures of vitality do not interject themselves. There are periods of rising force, of momentary elation, which give pleasure, though the general level is much below that of the normal vitality. Of course to the extent that prostration prevails pain rules and pleasure is banished, but we have already had occasion more than once to remark that neither pleasure nor pain are unmixed, but that there may even be, as Mr. Dallas in 'The Gay Science' insists, a painful pleasure, as there is certainly a pleasurable pain. It should further be noticed that there is often attendant upon nervous weakness a false elation which is accompanied with greater activity of the mind and an abnormal flow of spirits. This phenomenon exhibits a kind of pleasure which is only the precursor of marked nervous pain, and which is pervaded with the influence of the debility which induces it, thus producing pain in pleasure.

§ 16. 'The exercise of every function in the body (numerous and complicated as these functions are) contributes its quota of pleasure to the sum total of happiness. . . . The natural and quiet exercise of these vital but involuntary functions amounts to a sum total which cannot be expressed by numbers, nor defined by words. It is the feeling of *health* and *spirits*, a feeling which, like its source, is independent of the exercise of the animal and intellectual functions. It may exist independently of sensation, motion, perception, or reflection, yet gives acuteness to the first, activity to the second, clearness to the third, and soundness to the fourth of the operations. The truth of these propositions is too often and too mournfully proved by the converse. When the functions of organic life (circulation, digestion, secretion, etc.) deviate by any cause from their natural, and consequently their healthful state, although there may be no external indication or local recognition of such deviation, there will yet be some general or inexplicable feeling of discomfort, distraction, distress or discontent, varying in degree or intensity from the slightest *malaise* up to the most poignant feelings of misery, leading to insanity or suicide.'[1]

§ 17. In Spenser's 'Faerie Queene,' there is a personification of cheerfulness which is somewhat suggestive:—

> 'And her against cheerfulness was placed,
> Whose eyes like twinkling stars in evening clear
> Were decked with smyles, that all sad humours chased
> And darted forth delights, the which her goodly graced.'

In Collins' Ode, 'The Passions,' the associations of cheerfulness as indicating nervous vitality, are well shown, as sport, exercise, the morning air, the colour of health in the countenance, etc.

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[1] *The Economy of Health* (James Johnson, M.D., London, 1837), pp. 60, 61.

> 'But oh! how altered was its sprightlier tone
> When cheerfulness, a nymph of healthiest hue,
> Her bow across her shoulder flung,
> Her buskins gemmed with morning dew
> Blew an inspiring air, that dale and thicket rung—
> The hunter's call, to faun and dryad known!
> The oak-crowned sisters, and their chaste-eyed queen,
> Satyrs and sylvan boys were seen,
> Peeping from forth their alleys green;
> Brown exercise rejoiced to hear;
> And sport leaped up and seized his beechen sphere.'

I can hardly think it a mere coincidence (but if it were, it is a most happy one) by which *joy* follows *cheerfulness* in this ode. Joy is an enhanced, deepened cheerfulness, and does not subsist without nervous force in considerable degree.

§ 18. It may seem, perhaps, inimical to theories connecting joy and cheerfulness with functional vitality, that these emotions prevail in the midst of most depressing circumstances, sometimes even when the bodily powers are on the verge of death. The lightsomeness of those whom we should naturally expect to be crushed by the weight of accumulated ills has many times been remarked; and in some diseases the patient seems cheery, elated, and happy to the very last. It is evident enough that different disorders affect differently the nervous power, some attacking and undermining at once the foundations of general pleasurable sensibility, and others, while preying upon vital organs, scarcely affecting the nervous strength till the moment of dissolution. It appears that pleasure is diminished and the power of receiving pleasure abated in the ratio that the nervous tissue is affected. Lesion of some organs will destroy life, though the disintegration be not far extended, and the pain and general depression be small; while there may be a general disintegration spread over a larger tract, which proceeds gradually and causes much pain and distress though not immediately fatal, according to the locality and character of the disintegration. Therefore, while life lasts there may be manifested in varying degrees nervous vitality; and the presence of cheerfulness, good spirits and energy in the midst of depressing circumstances is itself a very excellent illustration of such vitality, and of the existence and maintenance of pleasure in the house of pain.

§ 19. It is impossible to read any description of living beings, their appearances or their acts, without having before one illustrations direct or recondite of functional vitality in some form. Scenes of pleasure represent it; scenes of pain recall it by contrast. It would seem superfluous, therefore, to occupy space in specifically illustrating further the states of feeling now before us. It may be advantageous, however, to refer to some few literary works which are so immediately concerned with the pleasures of vitality and pains of its absence as to be especially adapted to impress upon the mind the distinctive characters (so far as there are any) of this class of feelings. While cheerfulness is a characteristic form in which the pleasures of vitality are manifested, it is by no means the only form. Energy and fulness of animal life directed toward specific ends furnish no less marked illustrations. In Shakespeare's 'Venus and Adonis,' is a vivid description of nervous vitality, as associated with sexual desire, incidental to the main narrative and brought out in portraying the impatience of Adonis's charger before a mate, presented to him. In Milton's 'L'Allegro,' we have an assemblage of the representations which the poet in succession develops. First, like so many other masters of descriptive effects, he prepares the way for an appreciation of the beauties and joys he is about to unfold by setting out the horrors of the opposite side. He then personifies the subject of the poem, and holds to the imagination a goddess 'fair and free.' She is a denizen of heaven and known to earth; men call her Mirth, the reliever of distressing care,—'heart easing.' Her beauties are associated with those of Venus and the Graces, while the joys she brings are allied to those Bacchus gives. The inspiring pleasures of the springtide, the morning light, the breezes, the dews, the flowers, all are suggested and the health and glowing spirits of a blooming woman

'So buxom, blithe, and debonair.'

Further associations are those of

'Jest and youthful jollity—
Quips and cranks and wanton wiles,
Nods and becks and wreathed smiles,
Such as hang on Hebe's cheek
And love to live in dimple sleek,—
Sport, that wrinkled care derides,
And Laughter holding both his sides.

The movement of the dance follows, the merriment of social mirth, the endurance that keeps up pleasure through the night

'Till the dappled dawn doth rise.'

All the delights of life, pastoral, rural and urban, solitary and in society, take their places in the train, with their invigorating effects lauded and their rewards painted in attractive colours, the poem concluding with the vivifying influences of music,

'Married to immortal verse,'

whose delicious strains raise the spirits, fill the soul with their harmony and are a shield and protection 'against eating cares.'

§ 20. The various powers, graces, and accomplishments which attend functional integrity are often well illustrated in the personal descriptions which occur in biography. In Plutarch's Lives, the account given of Pericles contains some good examples of the self-poise, calmness, control and imperturbability which often are indicia of nervous power. In V. (1), his composure and serenity in addressing his audiences are commended, and the following incidents of his calm demeanour when persecuted by a vile and abandoned fellow (*ὑπό τινος τῶν βδελυρῶν καὶ ἀκόλαστων*) who followed him home, reviling and abusing him, is admirably calculated to impress one with his power of self-command.

So again in XXXVI. his government of his emotions at the death of his relatives and friends evidences his equanimity, the fact that he had feelings to control being manifest from the circumstance that at the burial of Xanthippus he was finally overcome by grief and shed a flood of tears. In Maxwell's 'Life of Wellington,'[1] concluding portions, the same kind of self-control under trying circumstances is narrated; also the associations of power which are attached to a fine physique are added. 'In the prime of manhood, Wellington's appearance indicated both activity and strength;' . . . the whole framework evincing a capability of enduring the extremity of fatigue . . . The general expression of the Duke's face was cheerful. In probably the most trying moment of his career, when the failure of the attack on the great breach at Badajos was communicated, he was observed to be pale, but perfectly collected.' In the hour of his triumph . . his eyes were eager and watchful, but his voice was calm and even gentle . . . . Seventy-one winters have shed their snows upon his honoured head, and those iron nerves which war and climate could not shake have felt the hand of time and owned its power—but though the frame has yielded, the mind retains its vigour, and the heart beats firmly as it once did upon the battle-field. Like the oak of that proud ship which bore the flag of Nelson, decay is traced upon the surface but the core remains intact.' Headley's 'Washington and his Generals' preserves the facts evincive of the great nervous vitality possessed by the First President. 'When sixty years of age, repose and calm dignity were his great peculiarities; at twenty, ardour and enthusiasm and love of adventure, formed his chief characteristics.' He was 'full of enthusiasm, feeling and daring,' 'cool and correct in judgment yet quick in his impulses.' 'Washington was not only cool in the hour of danger and utterly destitute of fear, but often impetuous and sometimes apparently reckless.' 'No finer subject can be found for the pencil of genius than he presents as he sits on his proud war-horse, midway between the volleys of his friends and foes, with the banner of his country waving its folds about his splendid form.' 'No one approached him without being awed by his demeanour . . . In that colourless face and in those blue eyes was a world of slumbering energy. His gigantic proportions indicated his overwhelming physical strength . . Before a man of such presence and such a soul, no wonder the most rash or impetuous was sobered . . His composure inspired awe, because it was not the composure of sluggishness, of immobility, but of reposing strength.'

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[1] London, 1852.

§ 21. If we were to enter upon the list of examples of vitality as illustrated in deeds of daring and in military powers and courage, there would be no end of pertinent examples; and among these, women no less than men would have a share. So also the firmness of martyrs at the time of execution would exhibit the force of endurance in a conspicuous manner. No more extraordinary illustration of the latter is recounted than Mary Queen of Scots upon the scaffold, who not only displayed before the critical moment a wonderful firmness, an admirable composure, gentleness and dignity, but even when the executioner struck and only inflicted a wound without slaying, such was her self-control 'that one did not see any part of her body move, nor even a sigh escape.'[1] Referring to women we are reminded too, how essentially in their beauty, comeliness, attractiveness and fascinations, nervous vitality has a part. A great deal of the charm of female loveliness depends upon exuberance of vital power. But sufficient has been said to give a tolerably full idea of the pleasures which are associated with vitality, and without delaying longer we will proceed to consider illustratively some of the pains which wait upon its opposite, prostration.

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[1] Jeulet, *Pièces et Documents*, Vol. II. pp. 880-1. Mignet, *Hist. Mary Queen of Scots*. London, 1851. Vol. II. p. 367.

§ 22. The discomforts of nervous prostration are treated with a marvellous amplitude of detail in a peculiar work, which stands in literature as an almost solitary attempt to give an exhaustive and scientific delineation and explanation of the phenomena of mental depression. Burton's 'Anatomy of Melancholy,' replete with evidences of a vast erudition, minute in its analysis, systematic to a fault, if there be any such thing as excess of systematic division, clear in description, comprehensive in scope, commends itself to the psychologist as a specimen and pattern of the true manner of dealing with the emotions of the mind; and when psychology shall have advanced farther toward completeness, there will be 'Anatomies' not of one alone but of many groups of feelings. I cannot avoid urging upon those who are anxious to labour in the field of mental science to study this great work, and imitating the thoroughness in gathering facts and the systematic methods of classifying them which the author displays, to leave other monographs upon the principal and minor aggregates of feeling which make up emotional life, regarding the most of which we have so little collected data that at best we can frame only a rudimentary science of mind at the present period of knowledge. It is a shame to existing civilisation that when other sciences are so well ordered and so far developed this, the most important and transcendent of all, has been till lately so largely in the hands of those to whom a search for facts is construed to mean war upon the gods, and to whom truth, if it contravenes preconceived theories, is only immorality and blasphemy.

§ 23. Milton's 'Il Penseroso' may well be placed beside the 'Anatomy of Melancholy,' in a further exposition of the pleasures which come to attach themselves to lessened vitality. The joys which Milton sings are not concurrent with extreme nervous prostration, but only with that lesser degree of vitality which forbids enjoyment of the active competition of life or the ruder and sterner scenes into which men of full blood and aggressive nature love to plunge. And some of these luxuries are, after all, only ameliorations and alleviations of a state intrinsically unhappy. As in the corresponding poem 'L'Allegro,' the introduction is a depreciation and abjuration of the opposite condition; as in the former also, so here the subject is personified and deified, and with the state and habit which the term *melancholy* typifies are associated holiness, devotion, purity, sobriety and wisdom.

'Come pensive nun, devout and pure,
Sober, steadfast and demure.'

The pleasures which darkness suggests are made use of skilfully; the propriety of a dignified and decent dress and an 'even step and musing gait,' are brought out:

'And looks communing with the skies.'

Calm peace and quiet,' 'spare fast,' 'retired leisure,' the cherub contemplation,' and 'mute silence.' At greater length the poet then dilates upon the glories and comforts of night, and then the sweet strains of 'sage and solemn' music telling what 'great bards' have sung. Again, melancholy is associated with the pleasures of the cool dark forests and groves,

'When the sun begins to fling
His flaring beams'—

where calm, repose and delight dwell, and where the 'dewy feathered sleep' with pleasant dreams, soothe and refresh. Once more the delights of melancholy are found in the 'studious cloister pale,' with 'the high embowed roof.'

'And storied windows richly dight,
Casting a dim, religious light.'

LIGHT AND HEAT—DARKNESS AND COLD.

§ 24. The pleasures of light and heat are intimately connected with those of bodily integrity; indeed they are included under and go to make up the former, but are more specific and particular, and have reference to function rather than structure. The real pleasures of light and heat are those which raise the level of vitality. The genial glow of warmth, the cheering beam of sunlight, quicken the circulation, invigorate the vital forces, and induce content and happiness. Out of these experiences grow many and varied representative pleasures, some of our most delightful æsthetic emotions being associated with the light in the conditions of colour. The primary pleasures most nearly allied with and most commonly attached to those now before us are, bodily integrity, repose and sexual gratification, together with movement so far as its facility is concerned. The pleasures of light are more characteristically intense; those of heat pervasive.

§ 25. The notion of the pain of darkness and cold carries with it the thought and reproduced feelings of disintegration, prostration, irregularity of function, interference and hindrance. In the absence of light the nervous force suffers abatement, energy is reduced, the capacity for far-reaching and unimpeded activity is diminished. By cold vitality is chilled, repressed and extinguished, movement is rendered impracticable (though at the first it tends to stimulate action) and there is often a severe pain in particular regions of the body which are attacked and whose life is menaced. The pains of darkness are pervasive, but usually not intense; those of cold may be both.

§ 26. The pains associated with light and heat come from the destroying influence of the agents. An intense light ruins the eye; excessive heat prostrates or consumes. Again, therefore, recur the pains of bodily disintegration. Irritation and inability to move also may alike follow a superabundance of light and heat; so also suffocation as affecting the respiratory organs.

§ 27. The pleasures associated with darkness and cold are those which spring out of relief from an excess of light and heat. In such case the former are adjuvants of vitality, and the pleasures which belong to a preserved, increased vigor attach themselves. Coldness becomes coolness, and delightful instead of unpleasant associations are formed. We experience the joys of repose and of nervous vitality, the former refreshing and the latter satisfying and making content. To some extent also sexual gratification is connected with darkness.

§ 28. Among the ideal pleasures of light and heat may be mentioned those of pleasant prospects in nature, landscapes, variations of light and shade, harmonies of colour in the fields, the mountains and the glades, glories of the sunrise and sunset; comforts of the blazing hearth-fire when the storm is raging without, the genial influence of the summer sun before its torrid beams begin to blast and shrivel; among the ideal pleasures of darkness and cold may be observed the charms of night which call forth the raptures of the poet, though here the pleasure seems after all to be equally dependent upon the light in the darkness, as the moon, the stars, the vistas of gas-lights in a city, the brilliant illumination of the ball-room, or the beautiful effects of pyrotechnics. This is but another illustration of the law of relativity, the pleasures of the light being greater on account of the attendant darkness. The represented pains of light and heat are suggested by the fierce and destructive lightning, the lurid blaze of conflagrations wherein life and property are sacrificed, the parched fields in drought, the stifling temperatures of midsummer, the dreary unrefreshed, uncooled desert wastes. In the pains of darkness and cold we include ideal pictures of the midnight assassination, the waylaying of the lonely traveller for robbery, the misery of him who has lost his way for want of the light to guide and reveal, the freezing blighting winter, the blinding snowstorm, the iceberg which crushes the vessel, the avalanche which sweeps down the mountain side dealing widespread ruin, and the sad state of the blind to whom life is a perpetual burden. All these pleasures and pains, however, pass into the secondary and tertiary classes very readily, and it is extremely hazardous to assert that they belong properly to one category, more than the other. All through our consideration of the products of feeling we shall at every step have brought home to our minds that pleasure and pain are always a plexus whose threads are so interwoven that to separate and classify so as to exclude entirely one from the other is an impossibility arising from the very nature of feeling itself.

§ 29. It is not the province of this work to indulge in literary criticism or comparison. Whatever is quoted herein or referred to is not selected for its literary merit chiefly (though the *sine quâ non* of literary excellence in description and portrayal, whether of nature or character, is fidelity to and consistency with fact); nor is it taken because it is necessarily the best representation of the psychological phenomena sought to be exemplified, but simply as being a fair illustration out of a vast variety to select from, of the feelings which are made topics of exposition. Premising this, we will, as before, proceed now to direct attention to some examples in literature of more or less representative allusions to and descriptions of the pleasures and pains of light and heat, darkness and cold.

The sun has always been the impersonation of the benefits and joys of light and heat. Says Southey:—

'I marvel not, oh sun, that unto thee
In adoration man should bow the knee,
And pour the prayer of mingled awe and love;
For like a god thou art, and on thy way
Of glory, sheddest, with benignant ray,
Beauty and life and joyance from above.'

As exhibiting the real pleasures which the sun gives, a short passage from Sir David Brewster is to the point. 'The glorious sun, the centre and soul of our system, the lamp that lights it, the fire that heals it, the magnet that guides and controls it; the fountain of colour, which gives its azure to the sky, its verdure to the fields, its rainbow hues to the gay world of flowers, and the purple light of love to the marble cheek of youth and beauty.' To this may be added from Sir R. Maltravers: 'Buoyed up by the animating and exhilarating influence of its vivifying rays we seem to survive in a sea of delight; abundant nature riots around us; our wants are contracted, our pleasures overflow.' And again an anonymous passage which I find: 'We have nothing but sunlight in summer or winter, think or talk as we may. The fire in our hearths, the gas in our tubes, the oil in our lamps, and the candles on our tables are all products of the sunbeam.' In these quotations we have brought out the sustaining and vivifying influence of light and heat in the whole universe, light's power to favour activity by enabling us to see; warmth with all its associations of personal comfort as affecting the temperature of the air about the body, and in preparing food and drink; magnetic and electric effects on vitality and in controlling movement, the beauties of nature in colour, and in the human person with the stimulus heat gives to sexual instincts; the abundance of joy light and heat produce in nature, and our dependence upon them for fire on the hearth, gas, oil, candles, which, in their turn, are instruments for producing other heat and light.

§ 30. For the more ideal or representative pleasures of light and heat we can turn to Thomson's 'Seasons'! to Moore's 'Lalla Rookh,' to Byron's 'Manfred,' Milton's 'Paradise Lost,' and indeed to the works of almost any poet. An example of very highly representative conceptions of light and its pleasures is seen in Dryden's 'Veni Creator Spiritus,' where the joys and glories of light are ascribed to a creator spirit and his action.

> 'O source of uncreated light,
> The Father's promised Paraclete!
> Thrice holy fount, thrice holy fire,
> Our hearts with heavenly love inspire.
> Come, and thy sacred unction bring,
> To sanctify us while we sing.'

Lowell's 'Winter's Evening Hymn to my Fire,' is a fine exhibition of the representative pleasures of heat. Very skilfully the author introduces as associated with fire and its heat the comforts of home, the greater ability afforded at the fireside to develop song and verse and perfect lessons of scientific wisdom, the enjoyments of tobacco-smoking with its soothing influence upon the nerves and its delightful reveries, the stimulus given to merriment, the tendency to soften, mellow and sweeten the tones and sentiments of conversation, to promote confidence and open the heart,—the whole effect being heightened by a few words calling up for contrast the discomforts of the cold without.

Among the many superb descriptions of sunrise and sunset none perhaps are more suited for our purpose here than two passages from Jean Paul F. Richter; the one of a sunrise from St. Peter's dome, and the other of a sunset over the Pontian Islands. The landscape beauties are exceedingly well portrayed: 'All at once the sun god stood upon the fair ridge; he stood erect in heaven and rent away the network of night from the covered earth; then burned the obelisk and the Coliseum and Rome from hill to hill, and on the solitary campagna sparkled in manifold windings the yellow giant snake of the world—the Tiber; all clouds dissipated themselves into the depths of heaven, and golden light ran from Tusculum and from Tivoli and from the vine hills into the many coloured plains, over the scattered villas and cottages into the citron and oak groves; low in the far west the sea was again as at evening when the hot god visits it, full of splendour, ever kindled by him, and became his eternal dews.' 'At this moment the sun touched the sea and a golden lightning darted trembling round through the humid ether—and he cradled himself on a thousand fiery wave wings, and he quivered and hung, burning and glowing with love on the sea—and the sea burning drank all his glow. Then it threw, as if he were about to pass away for ever, the veil of an infinite splendour over the pale growing god. Then it became still on the earth; a floating evening redness overflowed with rose oil all the waves—the holy islands of sundown stood transfigured—the remotest coasts drew near and showed their redness of delight--on all heights hung rose garlands—Epomeo glowed upward even to the ether, and on the eternal cloud-tree which grows up out of the hollow Vesuvius, went out on the summit the last thin glimmering of splendour.' In connection with this I would beg to refer the reader also to a magnificent description of an auroral scene in Hall's 'Arctic Researches' (Chapter VIII.).

§ 31. For exemplifications of the pains of darkness I would refer to some verses of Spenser's 'Faerie Queene' and to the highly imaginative poem of Byron, bearing that title. The former speaks of night as 'grisly,' 'with visage deadly sad'—

'And in a foul, black, pitchy mantle clad,
She finds forthcoming from her darksome mew;
Where she all day did hide her hated hue;

* * * * *

But well I wot that to a heavy heart
Thou art the root and nurse of bitter cares,
Breeder of new, reserver of old smarts;
Instead of rest thou lendest railing tears,
Instead of sleep thou sendest troublous fears
And dreadful visions, in the which alive
The dreary image of sad death appears;
So from the weary spirit thou dost drive
Desired rest, and men of happiness deprive.

* * * * *

Under thy mantle black there hidden lie,
Light shaming theft and traitorous intent,
Abhorred bloodshed, and vile felony,
Shameful deceit and danger imminent,
Foul horror and eke hellish dreriment.'

In these verses the description is to a high degree representative. By association darkness is made to suggest depression in the comparison to a being of sad countenance; filth and depravity in the reference to a creature choosing darkness rather than light as if because its deeds are evil; the opportunity given for unpleasant recollections and ruminations which bring 'troublous fears' and 'dreadful visions' driving away rest; the horrors of theft, bloodshed, and all the dangers to which darkness exposes one. Byron's poem brings to mind the more realistic horrors of darkness. The poet first allies the absence of light with absence of heat.

'——The icy earth
Swung blind and blackening in the moonless air.'

He then sings of the fear that falls upon all men

'And men forgot their passions in the dread
Of this their desolation; and all hearts
Were chilled into a selfish prayer for light.'

The pangs of deprivation of the comforts of sight in connection with society are referred to, the devices to obtain light by kindling fire and the terror that failure renews; the loss of self-control in the presence of great horror; the additional discomfort from the strange acts of the lower animal creation, which seems to share the general disquietude ; the further panic caused by inability to find food, and with it the agonies of hunger, war, and death. The griefs of darkness from another cause, with associated ills, are presented with wonderful vividness in Milton's 'Samson Agonistes :'

> 'O loss of sight of thee I most complain,
> Blind among enemies, O worse than chains,
> Dungeon or beggary, or decrepit age !
> Light, the prime work of God, to me is extinct,
> And all her various objects of delight
> Annulled, which might in part my grief have eased,
> Inferior to the vilest now become
> Of man or worm ; the vilest here excel me ;
> They creep yet see ; I dark in light exposed
> To daily fraud, contempt, abuse and wrong,
> Within doors or without, still as a fool
> In power of others, never in my own ;
> Scarce half I seem to live, dead more than half,
> O dark, dark, dark amid the blaze of noon,
> Irrecoverably dark, total eclipse,
> Without all hope of day !'

In the above the pain is depicted largely by contrasts either of pleasures or of other pains. The pains of imprisonment, beggary, or old age are inferior; the pleasures of light, the prime joy in nature, and her associations are gone; the weakest and most despised excel one who is blind. Abuse, fraud, fall to his lot also ; impotence follows ; and finally, by repetition and the use of an exclamatory sentence, the impression of great emotion is communicated, misery unutterable and despair.

§ 32. Of the pains of cold we are not apt to find descriptions among the poetical accounts of winter and winter scenes ; in these latter the delights and ameliorations of frigid temperature assume the greater prominence. Of the re-representative pains of cold, those authors who treat of the influence of climate upon civilisation and character will furnish illustration. For instance, Buckle[1] remarks the effect of cold (and heat also) in the interruption of labour. He mentions two northern countries where this effect is produced by the severity of the winter and by the shortness of the days, that is, by cold and darkness. As a consequence follow the evils which arise from instability and fickleness of character. 'No people living in a very northern latitude have ever possessed that steady and unflinching industry for which the inhabitants of temperate regions are remarkable ; . . . the chain of their industry is as it were broken, and they lose that impetus which long-continued and uninterrupted practice never fails to give.'[1]

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[1] *Hist. of Civilisation*, Vol. I. General Intro. Chap. II.

§ 33. Another variety of the pains of coldness is that which occurs from moisture. The sensation of wetness is possibly susceptible of identification with coldness.

§ 34. Light and heat, in their character as bestowers of sorrow and agony, are not absent from literature. The first book of Paradise Lost depicts the misery of Satan and 'his horrid crew weltering':—

'— — O'erwhelmed
With floods and whirlwinds of tempestuous fire.
* * * * *
A dungeon horrible on all sides round
As one great furnace flamed, yet from those flames
No light but rather darkness visible
Served only to discover sights of woe.'

This is a very remarkable painting of light yielding not its accustomed pleasure but only pain, so as to seem not light at all but rather 'darkness visible.' The unrest and irritation which the torrid heat produces are introduced, and the suggestions of death and desolation in the 'livid flames.' In a later verse the uneasiness caused by heat is shown.

'He walked with to support uneasy steps
Over the burning marle, not like those steps
On Heaven's azure, and the torrid clime
Smote on him sore besides, vaulted with fire.'

Heat, as affecting terrestrial realms, is made a theme in Thomson's 'Summer' in the passage beginning—

''Tis raging noon; and vertical the Sun
Darts on the head direct his forceful rays.
O'er heaven and earth, far as the ranging eye
Can sweep, a dazzling deluge reigns; and all
From pole to pole is undistinguished blaze.'

The painful effects on the human body are first told as pains coming from wounds or blows from a furious being; the eye is dazzled and overwhelmingly as by a deluge; reflection from the ground meets the organ seeking to avoid the pain; vegetation is parched up; the genial emotions of the soul are quenched; a general languor seems to pervade the face of nature; the head throbs, and the heat incessantly beats down; night is desired impatiently, and thought of its coolness renders the heat more unendurable; while finally the happiness of those who can gain cool retreats occurs to the mind to heighten the conception of the misery of being exposed to the fierce noon-day blaze.

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[1] Buckle, p. 32, N. Y. 1858.

The phenomena of drought or long-continued heat in a wider range than is embraced by the last quotation are covered very completely in the thirteenth Book of Tasso's 'Gerusalemme Liberata,' (and also in the sixth Book of Lucretius, from which author the former is said by Hoole to have borrowed) from the L. to the LXV. stanzas. A kind of representative pains of heat, namely those of sickness and pestilence resulting from excessive heat, is alluded to in Stanza LIII. and again in Stanzas from LXI Stanza onward. Probably no better description of the destructiveness of great heat can be pointed out than that contained in the story of Phaethon in Book II of Ovid's 'Metamorphoses.' Indeed, both the pleasures and pains of light and heat receive ample illustrations therein.

§ 35. Byron is matchless in his delineations of the 'horror of great darkness,' which has taken universal and paramount control. If then, after reading his wonderful poem, we take up Young's 'Night Thoughts,' Book IX. and read his apostrophe to night, we shall by contrast make vivid the enchantments of darkness and mark some of the pleasures which are associated chiefly with night, though really they are in part joys of light in darkness.

> 'O majestic night!
> Nature's great ancestor! Day's elder born!
> And fated to survive the transient Sun!
> By mortals and immortals seen with awe!
> A starry crown thy raven brow adorns,
> An azure zone thy waist; clouds in heaven's loom
> Wrought through varieties of shape and shade,
> In ample folds of drapery divine,
> Thy flowing mantle form, and Heaven throughout
> Voluminously pour thy pompous train;
> Thy gloomy grandeur (Nature's most august,
> Inspiring aspect!) claim a grateful verse;
> And like a sable curtain starr'd with gold
> Drawn o'er my labours past shall close the scene.'

The whole book is an exhibition of the associations (both pleasurable and painful) of night and darkness. Among other things the benefits of sleep are referred to, which we shall have occasion to notice hereafter in connection with repose.

> '——Darkness aiding intellectual light,
> And sacred silence whispering truths divine.'

The poet hints at two prominent virtues of darkness, the one a more presentative pleasure, that of silence as associated with repose; the other more representative, that of opportunities afforded by freedom from distracting influences, to gain knowledge and wisdom. Young is fond of uniting silence and darkness, and I think rightly, if he desired to indicate that the former is a principal charm of the latter.

In Night I., the reader will remember

'Silence and Darkness! solemn sisters! twins
From ancient night, who nurse the tender thought
To reason and on reason build resolve
(That column of true majesty in man).'

Aside from the primary, quieting, soothing effect of silence, it is no mean representative pleasure that it favours reflection and noble resolve. Alike true is it that

'Night's deepest gloom is but a calm
That soothes the wearied mind;'

and that in this holy calm, 'nursing solitude' loves to lift

'Her soul above this sphere of earthliness.'

It must not be forgotten, however, that the pleasures of darkness are not to all the pleasures of repose; to some they are pleasures of occupation either lawful or unlawful. Says Massinger,

'Quiet night that brings
Rest to the labourer, is the outlaw's day,
In which he rises early to do wrong,
And when his work is ended dare not sleep.'

Still another pleasure of darkness is revealed in the words of Bailey in 'Festus,'

'But I love night the most because she brings
My love to me in dreams.'

§ 36. If a boy were asked what were the pleasures of cold, his mind would very probably revert to his winter sports of coasting or skating; the young maiden, in response to such an interrogatory, would direct her thought to the merry sleigh-bells; the more mature person would dwell upon the benefits which winter brings to his material interests. There are both beauties and utilities of cold; it is often a tonic to the system, sometimes a positive, eagerly enjoyed, rapturous pleasure. The consideration of the griefs of heat have awakened associations of the joys of coolness;

we will now consider the attendant pleasures, where cold is prevailing and in the main a stimulus of painful feelings. That standard work portraying the scenes attendant upon the vicissitudes of the 'Seasons,' furnishes winter pictures no less true than those of summer.

> 'Behold the joyous winter days,
> Frosty, succeed; and through the blue serene,
> For sight too fine, the ethereal mitre flies;
> Killing infections damp, and the spent air
> Stowing afresh with elemental life.'[1]

These pleasures of winter are among the more representative. The æsthetic delights are well exemplified in Andrew Norton's verse:

> 'The keen, clear air—the splendid sight—
> We waken to a world of ice;
> Where all things are enshrined in light,
> As by some Genie's quaint device.
> 'Tis winter's jubilee—this day
> His stores their countless treasures yield;
> See how the diamond glances play
> In ceaseless blaze from tree and field.'

Associated with winter's pleasures are the joys of air and of light. Cowper's 'Task' abounds in the incidents of winter. The 'Winter Morning Walk' displays the beauties of the landscape in winter; the woodman's work in the leafless forest attended by his cur, which

> '——With many a frisk
> Wide scampering, snatches up the drifted snow
> With ivory teeth, or ploughs it with his snout;
> Then shakes his powdered coat and barks for joy.'

The general attitudes and movements of the animal tribes are also treated, and in such a way as to throw an æsthetic colouring over woes. In the 'Winter Walk at Noon' the pleasures of silence and meditation are dwelt upon. In 'Winter Evening,' by the same author, the comforts of repose and society are prominent. Spite of the bitterness, and dread of cold and storm, wrathful, blustering, chilling, chattering, paralysing, desolate, sullen, sad winter, spite of all, sings Thomson in the 'Task':—

> 'I crown thee king of intimate delights,
> Fireside enjoyments, home-born happiness,

Thomson.

And all the comforts that the lowly roof
Of undisturbed retirement and the hours
Of long, uninterrupted evening know.'

And if we would know more of these 'intimate delights,' whose pen but that of Whittier can depict them for us, as in 'Snow Bound?' In conclusion, for both pleasures and pains of cold no better reference can be made than to Gavin Douglas's 'Description of Winter,' where delights and woes are set forth in wonderful variety, and in such combination and alternation as to present both very vividly.

RESPIRATION—SUFFOCATION.

§ 37. The full, pervading satisfaction felt by a person when he draws a deep inspiration to which he is impelled by a stimulating exercise, furnishes the typical pleasure of air. It is a pleasure not disconnected from that of bodily integrity, for to a diseased lung respiration does not bring relief; nor from nervous vitality, for without the latter no first class pleasure is realised; nor from movement, for by exercise it is made possible. With all these other pleasures it is directly connected, yet forms by itself a pleasurable experience not resolvable into any other. The characteristic pain which is opposed is that of suffocation or stoppage of respiration, and closely joined with it that which ensues from the passage into the lungs of air insufficient in quality. It is quite out of the question also to separate from these in association the distress which follows the inhalation of sharp, cold, irritating air into weak or diseased lungs, though properly these pains should be classed with those of disintegration, or possibly of cold. Men are accustomed to regard together all the delights and ills which belong to the respiratory system.

§ 38. The pleasures of respiration, then, have associated with them the enjoyments of bodily integrity, nervous vitality, movement and exercise, more closely and directly than other primary pleasures. Whatever pains are associated with respiration are to be referred chiefly to cold, irritation, and disintegration. With the pains of suffocation are allied principally those of disintegration and prostration. There seem to be no associated pleasures attached to suffocation (except those of greater good to follow the suffering, but such are not peculiar) unless where it is gradual (as in consumption or asthma); the ameliorations of sickness generally are to be reckoned. The pleasures of respiration are pervasive rather than intense; the pains of suffocation are more prominently intense than pervasive.

§ 39. 'Good air is one of the first essentials in physical and vocal exertion. No one can keep the body and mind vigorous for any great length of time in impure air. . . . The lungs should be trained to free, full and vigorous action. They are, so to speak, the very springs of vitality. The more immediate importance of the lungs in the animal economy will be brought to mind when we recollect that a person may live for days without food; but to deprive him of air, even for a few moments, is to deprive him of life itself. If our breathing is imperfect, all the functions of body and mind are impeded. In fact, the manner of breathing at any particular time is almost as good a test as the pulse itself of the general state of the system, physical and mental.'[1] 'We can simply breathe in a torpid, lifeless manner, because we cannot help it, as we do during sleep, or we can breathe with a *will* which will purify the blood and send it throughout the system, giving life and activity to both body and mind. Full and vigorous breathing brings into activity and strengthens all the muscles whose healthy action gives form, beauty and capacity to the chest and body, and it constitutes one of the most efficacious measures we have for the relief and prevention of deformity of the chest.'[2] In these extracts the pleasures of respiration are associated with those of exertion, general vitality, and bodily integrity. The pains of deprivation of air are suggested as hindrances to the free exercise of mental and bodily functions, and even extending as far as entire cessation of those functions, or death. The invigorating effects of full respirations are especially dwelt upon in the last quotation, among the more remote pleasures of which are those of improved health in general.

§ 40. In descriptions which introduce the air we breathe, reference is usually had to the influence of winds and odours. Neither of these, whether pleasurable or painful, concern respiration proper. The feelings which wind or air in motion generates are chiefly sensations of cold; those produced by odours are connected rather with the digestive and sexual systems. There is, however, sometimes introduced the idea of relief from oppression which indicates the distinctive pleasure of respiration. For instance Wordsworth, in the opening lines of 'The Prelude,' after alluding to the delicious coolness and softness of the breeze—

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[1] Monroe, *Physical and Vocal Training*, Phila. 1869.

[2] *Avoidable Causes of Disease*, Ellis, N.Y. 1860.

> 'O there is blessing in this gentle breeze,
> A visitant that while it fans my cheek
> Doth seem half conscious of the joy it brings
> From the green fields and from yon azure sky,'

expatiates upon the gratefulness of the air, as if there had been previously only a stinted supply through an oppressive weight now removed—

> 'Whate'er its mission, the soft breeze can come
> To none more grateful than to me; escaped
> From the vast city where I long had pined
> A discontented sojourner, now free,
> * * * * *
> The earth is all before me * * *
> * * * * *
> * * * I breathe again!'

We will now refer to Book I. of Armstrong's 'Art of Preserving Health,' where we shall discover an uncommonly full treatment of the pleasures and pains associated with air. The poet at the beginning invokes Hygeia as a power in the air to diffuse 'life and vigour' and to drive away 'pain and sickness,' and—

> 'Whatever shapes of death
> Swarm through the shuddering air, whatever plagues'

famine breeds or rise from putrid swamps, or 'damp waste forests' or the 'rotten south' produces, or extremes of heat and cold, dryness or moisture,

> 'The secret poisons of avenging heaven.'

The impurity of the air of cities is then well set forth. The author spiritedly calls upon the afflicted to fly to 'rural wilds' where 'ambrosial' breezes summon and with 'fostering power,' '*regale*' plant, man and beast. The comparison to the pleasures of repletion is worthy of notice. Landscape pleasures are adverted to in the direction what places to seek and what to avoid. The 'cheerful air' is associated with the greenness of the Kentish hills; the 'baneful joys' with the 'marshy plains' whence come 'feverish blasts,' 'cold tremours;' with 'mighty love of rest,' 'convulsive yawnings,' 'lassitude;' then 'parching heat' which banishes from the face 'the cheerful, pure and animated bloom' and induces disease of various kinds. For similar causes the 'marshy margin of the main' is to be avoided.

'——The spongy air
For ever weeps; or turgid with the weight
Of waters, pours a sounding deluge down.'

So also 'air may be too dry.'

'The lungs grow rigid and with toil essay
Their flexible vibrations! or inflam'd
Their tender ever moving structure thaws.'

The blood moves 'slow as Lethe,' melancholy overtakes the system, and

'——Sudden tumults seize the trembling nerves,
And burning fevers glow with double rage.'

After encouraging avoidance of extremes Armstrong brings into the poem the whole range of good and ill resulting from variations in climate and in the surface of the ground, together with the pleasures of judicious exercise, and of temperance in eating and drinking and of occupation, showing in a very felicitous manner the complete interdependence of all pleasures. Towards the end, the luxury of sweet odours receives notice. Domestic happiness as affected by air is sketched, and advice given where to build so as to be defended from the 'blustering north'

'And bleak affliction of the peevish east;'

to obtain 'ambrosial rest;' to secure

'The trembling air that floats from hill to hill,
From vale to mountain, with incessant change
Of purest element, refreshing still,'

and to escape 'deadly putrid airs.' Dryness of the house and the importance of ventilation are touched upon, and finally the association between the pleasures of air and those of light and heat is made the subject of a fitting close in a portrayal of the 'genial vigour of the sun,' and an apostrophe to him

'First-born of heaven, and only less than God.'

§ 41. I will now quote from Loomis's 'Diseases of the Respiratory Organs, Heart, and Kidneys'[1] an account of the pains of respiration where it is interfered with by asthma. 'Ordinarily the individual goes to bed as well as usual, and quietly falls asleep; after an hour or two, while he is still asleep, the characteristic wheezing commences, and soon he is awakened by a most distressing attack of dyspnœa. He feels as if his chest were compressed, sits up in bed and rests his elbows on his knees, and with fixed head, elevated shoulders and mouth open, labours for breath. His face becomes red, and tinged, or livid, his eyes prominent, his surface covered with perspiration; he springs out of bed and hastens to an open window in search of air; respiration is noisy and wheezing, his inspirations are short and jerking, while the expirations are prolonged and terminate with a sudden effort at expulsion. If the bronchial spasm is prolonged, the surface temperature falls below the normal standard, the extremities are cold, blue and shrunken, and the patient appears to be dying. The pulse during the paroxysm is small and feeble in proportion to the intensity of the dyspnœa. The duration of the paroxysm varies; at one time it lasts only a few minutes, at another time an hour or two, in rare instances it may continue two or three days without intermission. As the paroxysm passes off, the patient begins to cough and expectorate.'

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[1] New York, 1875.

§ 42. In a work by Dr. Alcott on the laws of health, the following passage exhibits the damaging consequences of bad ventilation, illustrating the pains of suffocation to the extent caused by vitiated air in a school-room. 'The very young pupils first begin to yawn and give signs of distress, both because they have less employment than those who are older, and because they sooner breathe the denser carbonic acid gas. And they not only yawn on the one hand, or become restless and troublesome to the teacher on the other, but they are all excited to do positive mischief. Or, if they are too well educated in the school of obedience and good manners to do anything worse, they soon fall into the habit of picking their nails or other vulgar movements for the mere sake of relief. With the blood half renewed they cannot be quiet; and to do something to relieve themselves is almost inevitable. Many a ferule is plied and not a few rods broken in a fruitless endeavour to reduce to order and bring into subjection where nature most loudly remonstrates. The teacher may feel very comfortable, and so may not a few of the older pupils; while the little children are half immersed in aerial poison. Every school-room, and indeed every other room where there is no natural or intentional provision for ventilation, is a Grotte del Cane to its occupants.'

§ 43. The most striking and remarkable illustration of the extreme pains of suffocation which would be likely to occur to any one is the sufferings of the prisoners in the Black Hole of Calcutta. An article on this subject in Chambers' 'Miscellany' is extremely pertinent to the present exposition but too long to be quoted.'[1]

MOVEMENT AND EXERCISE—INACTION AND INABILITY TO MOVE.

§ 44. The pleasures of movement and exercise constitute a large share of the happiness of mankind. Exercise is food to the body, and without it life becomes a prey to disease, debility, and disintegration. By a judicious amount of exercise, the body is invigorated and growth promoted. With the general capacity for movement comes the power to acquire knowledge; in truth, as has been shown elsewhere, the very beginning of sensation is in movement. Associated, therefore, with the pleasures of movement are those of integrity and of functional vitality, of respiration, for the greater joy of breathing arises when the system is stimulated by locomotion, and breathing is itself movement; of light and heat, since light favours exercise and affords a better opportunity and variety therein: and heat in moderation is requisite to sustain nervous vitality; and of repletion, inasmuch as unless the body be well nourished, exercise cannot be favourably taken. With the other primary pleasures, namely, repose, society, and sexual gratification, the association is more remote, though not entirely absent. It would seem that the pleasures of repose were wholly antithetical to those of movement, but it must be recollected that the sweetest repose follows exercise so vigorously pursued as to exhaust, and that hence exercise is a minister to repose, and with the pleasures of the latter may be associated also pleasures of the former kind. Sexual gratification involves movement, and the charm of society is often dependent upon an extended acquaintance and changing scenes.

§ 45. The pains opposed to movement arise either through disorder of the system or through outward constraint. The latter class are more presentative, the former more representative. Taken together, they both involve disintegration and prostration; with them are associated darkness and cold as restraints upon movement; so also suffocation, but less directly; irritation, solitude; sometimes sexual oppression which cannot be relieved through restraining influences. Hunger and thirst do not seem to be associated with these pains except through the media of disintegration and prostration. The pleasures of movement and exercise, and the pains of inaction and inability to move are not generally of the intense order, though there may be intensity at times, particularly of pain.

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[1] *Pocket Miscellany*, Vol. I.

§ 46. The pains associated with movement and exercise are of disintegration and prostration, coming largely as fatigue from over exertion, and as injuries to the organs from the same cause, or from outward agents encountered in fulfilment of the desire for exercise. Irritation from similar causes is a common drawback to the full pleasures of such indulgences. Hunger and thirst are suggested in the same connection. With the pains of inaction are allied the pleasures of repose, of repletion, of sexual gratification, of society to some extent; where there is inability to move, the ameliorations are fewer; but it is noticeable that with idleness there are many presentative delights, while the pains are representative in the main, the result often being that the former direct the conduct, outweighing the latter entirely. In such a case a man is said to be under the control of appetite and passion in opposition to prudence, wisdom, and morality.

§ 47. Dr. Armstrong's poem[1] has a book concerning 'Exercise,' which is full of representative pleasures. The opening conjures the delicate and sedentary to seek exercise, thus contrasting with the advantages of movement the pains of inaction. The firm health of 'the labourer of the glebe' is proof against 'sickly stars,' 'midnight fogs,' the 'envenomed shafts' that fly in dog days, 'the peevish eastern blast,' and 'the mortal south.'

> 'Toil and be strong. By toil the flaccid nerves
> Grow firm, and gain a more compacted tone;
> The greener juices are by toil subdued,
> Mellow'd and subtilised; the vapid old
> Expell'd, and all the rancour of the blood.'

To him who exercises, the 'charms of nature' in all seasons give enjoyment. The refreshing influences of the breeze are his: the exhilaration from mountain-climbing and horseback riding; the glories of light, as the 'cheerful noonbeams o'er the hills;' the chase for 'the desperate deer;' the pursuit of the 'silver joy' in 'the crystal rivulet'—'a sport of less fatigue, not less delightful,' amid 'flowery meads' and 'romantic groves,' and mayhap historic scenes. Other associations of exercise are the 'humane delights' which 'the garden yields.'

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[1] *Art of Preserving Health.*

> 'Thrice happy days! in rural business past.'

All the joys of agricultural pursuits are brought to mind, the raising of the fruits of the ground, the freedom from 'the selfish crowd,' and the 'stormy world's' 'ungrateful cares,' the pleasures of eating and drinking what is produced, 'the sweetest, proudest charms of Flora,' 'Pomona's juice,' and all the domestic and social happiness of the 'blest winter nights.' Upon one who recalls how, in Lowell's 'Hymn to my Fire,' before quoted, the pleasures of heat have associated with them the comforts of domestic and social happiness on the winter nights and those of cold in Whittier's 'Snow Bound,' have very similar associations, the addition of this picture of the same joys as connected with exercise, will impress very forcibly the fact of the wide range which association takes and the multitude and complexity of the threads of connection which bind experiences together. Undoubtedly this very same group of pleasures might, without doing violence to our sense of fitness, be joined with every one of the primary divisions. The pleasures of games and sports are next referred to—'the manly foils,' 'the tennis,' 'the graceful dance;' the poet then dilates upon the necessity of moderation and care in order to enjoy exercise and guard against great fatigue and injury, setting forth the pains of over-exertion and of imprudences. The remainder of the poem is taken up with precepts as to when, how, and under what circumstances exercise should be taken, and with descriptions of some of the ills of disease which follow disobedience to the laws of health, the whole concluding with an account of the ravages of pestilence, which has no more relevancy to this branch of the author's work than to any other.

§ 48. More manifestly perhaps than in any preceding case appears the impracticability of illustrating more than a very small fraction of the kinds of exercise and their various pleasures. Burton, in the 'Anatomy of Melancholy,' enumerates a large number of varieties. The twenty-third book of 'Homer's Iliad' is devoted to a description of athletics, sports, and games of various sorts which were ordained in honour of Patroclus. These exhibit both the pleasures and pains of exercise, pleasures insomuch as they remind us of great physical strength and health, exhilaration prompting to contest, the interest of a spectacle and the rewards of victory; pains insomuch as they represent the bitterness of defeat and failure and the physical abrasions and disorder wrought in the rough encounter. In contests of this general character, the prizes are no mean element of the pleasures. These prizes are of value for their own intrinsic worth, or because they are marks of distinction serving everywhere to recall the triumph won. Such rewards are of great variety, and each one suggests its own group of pleasures. Those offered by Achilles were of value in themselves, as well as being of symbolic consequence. In the 13th chapter of Sir Walter Scott's 'Ivanhoe' there is an interesting representation of a trial of skill at archery; and in the 8th chapter begins the account of a tournament of which the trial at archery is an appendage and which might take its place beside the Homeric narration of ancient festivals of a similar sort. The pomp and circumstance of the more modern tourney were far greater than attended the ruder sports of the Greeks, but the pleasures environing and accompanying the latter are not essentially different from those which crowned the former. Quite a noticeable difference is found, however, in the relative position occupied by woman in the enjoyments of the sports; in the Greek games she is a prize of victory 'valued at four oxen;' in the English tournament she is 'the fair sovereign of love and beauty,' to be named by the successful knight, and to be crowned by whom was the greatest reward the victor could desire. Though there is much difference in the details, the pleasures recounted are still those of exercise associated with functional vitality, bodily integrity, of society, aggression and conflict, of applause and other rewards of victory—the same as are indicated in the Homeric poem. Analysing the two narratives together we find only the same pleasures and pains combined and re-combined in different order and degree. The increase of pleasure to the spectators in proportion as the conflict is fraught with more danger to life and limb to the combatants is an item which is worthy of especial note in connection with the tourney, and is well marked in the author's description.

§ 49. Virgil's 'Georgics' abound in pictures of the delights of agricultural employments. But though agriculture is thus associated with exercise, it is also associated (and more prominently I think) with alimentation, since toil is so largely for the sake of bread. And besides, those exertions which are of the nature of play are more characteristically the furnishers of the delights of exercise. In play the pleasures are of a lively presentative character, pleasure being the immediate and chief attendant upon the exercise; in work the presentative and more direct feelings are painful usually, the sustaining pleasures being representative, and having their existence in thoughts of the good things which are the fruit of toil. Therefore, leaving for subsequent illustration those exercises which are of the character of labour, and omitting a longer stay upon the delightful offices of husbandry and agricultural occupations, we will pass on to dwell for a moment upon the kindred subject of rural sports. I select for the purposes of illustration a poem bearing this title, and written by John Gay. The author brings to his aid in the introduction, as associated with the pleasures of rural sports and giving to the latter a portion of their charm, the delights of repose, of nervous vitality, of light and heat, of coolness, and all the associated joys of a country life, many of the associations being the same that we found so potent to give us a representation of the pleasures of light and heat and also of respiration.

'— —A calm retreat I chose
And soothed my harassed mind with sweet repose,
Where fields and shades and the refreshing clime,
Inspire the sylvan song and prompt my rhyme.
* * * * * *
'Tis not that rural sports alone invite,
But all the grateful country breathes delight;
Here blooming health exerts her gentle reign
And strings the sinews of th' industrious swain.
Soon as the morning lark salutes the day
Through dewy fields I take my frequent way,
Where I behold the farmer's early care,
In the revolving labours of the year.'

The delightfulness of cooling shade at mid-day is sung, the pleasure in surveying the growth and fruitage of the earth's products, amatory pleasures of animals, all the various kinds of rural employments, the sunset, the glories of the night heavens, and the sweetness of contemplation, therewith attached, the vicissitudes of the seasons—all have their place as connected with the central subject. The poet then enlarges upon the pleasures of fishing:—

'Upon a rising border of the brook
He sits him down and ties the treach'rous hook;
Now expectation cheers his eager thought,
His bosom glows with treasures yet uncaught,
Before his eyes a banquet seems to stand,
Where every guest applauds his skilful hand.'

How naturally are here brought together in association the pleasures of exercise, society and repletion, as the fisherman is made to find zest added to his sport by the thought of the banquet and its social attractions! In the following verses the pleasures of pursuit (which grow out of those of alimentation) are made very vivid and real, while in close union with these are the felicities of skill and other pleasures beyond the primary. Turning to another class of sports, the bard sings:—

'Yet if for sylvan sport thy bosom glow,
Let thy fleet greyhound urge his flying foe,
With what delight the rapid course I view!
How does my eye the circling race pursue!
He snaps deceitful air with empty jaws;
The subtle hare darts swift beneath his paws;
She flies, he stretches, now with nimble bound,
Eager he presses on, but overshoots his ground;
She turns, he winds and soon regains the way;
He tears with gory mouth the screaming prey.
What various sport does rural life afford!
What unbought dainties heap the wholesome board!'

With an extended description of the enjoyments of the chase and some allusions to country domestic life the poem concludes. The last extract is a fine example of the association between exercise and alimentation.

But in descriptions of the chase Somerville excels, and in an elaborate poem sets forth its numerous delights. He explains the origin of hunting to have been in 'devotion pure' and 'strong necessity.'

'——For the green herb alone
Unequal to sustain man's labouring race,
Now every moving thing that liv'd on earth
Was granted him for food.'[1]

He then in the course of the poem descants upon hounds as accessories to the chase, their different kinds, their breeding, education and use, the power of instinct in brutes, the various incidents of hare hunting, the magnificence of the chase among the Asiatics, wolf-hunting, fox-hunting, pursuit of the lion, the elephant, the tiger, the wild boar, the royal stag chase at Windsor Forest, and finally upon other hunting. One representative pleasure of the chase, to which there has been no reference and which Somerville makes something of, is that coming from the fact that the world is benefited by the destruction of many noxious beasts, which are dangerous to the lives of human kind, or prey upon the possessions of men.

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[1] Book I.

To Isaac Walton the delights of fishing, so abundantly exemplified in that charming work 'The Compleat Angler,' embraced as a chief item the joys of contemplation, quiet, freedom from annoying cares; the angler's pleasure it is to rejoice in flowery meads or by crystal streams. But though the stress laid by the author on the pleasures of contemplation is so considerable that it appears again in his pages, and he styles the sport of fishing itself 'the contemplative man's recreation,' he was by no means above an appreciation of the exquisite relish of a well-cooked fish dinner, as the reader can ascertain for himself by turning to the latter part of Chapter VIII., Part I., where a dish is described 'too good for any but anglers or very honest men,' and the account of which is so appetising as to 'make the mouth water.'

§ 50. Gay's 'Trivia' is replete with the representative pleasures and pains of walking, warning against the uncomfortable attendants, and teaching how to make a walk most enjoyable. How to avoid 'jostling crowds,' 'how to walk clean by day and safe by night,' 'through winter streets' is the burden of the poet's song. In the first part the comforts of walking when one has suitable clothing and attire, and when the weather is propitious, are advanced, while the corresponding discomforts of opposite circumstances are suggested. In the second book the annoyance of encountering people whose trades render their clothing liable to soil the passer-by and the general inconveniences of a thronged street by day are instanced; the noise and the boot-black's art suggest other matters of pain and pleasurable interest; so also the varying habits and appearances of the loungers and pedestrians on the road; the noise and rumble of the wagons is disagreeable and there is delight when the tumult is left behind, and the walker wanders

> '——In the close abodes
> Where wheels ne'er shake the ground.'

The rain storm coming up suddenly is another incident of walking which, according to circumstances, may excite pleasure or pain. The long whip of the coachman which he recklessly flourishes is to be avoided; likewise there is torment to the traveller

'——When summer's sultry days
Parch the dry ground and spread with dust the ways.'[1]

Slippery pavements, the poles of passing carriages, snowballs, football, dirty waters from balconies, are particular perils of traversing the streets of the town. On the other hand the hucksters and their wares often attract and please. Beggars are found and in some cases it is an agreeable sight to behold them, and a source of joy to relieve them; 'the brass knocker wrapt in flannel band' saddens with its remindings of mortality; at night (Book III.) there are greater dangers from thieves and robbers; the chase and capture of a thief is a thrilling scene; still more the night conflagration; the harlot walks abroad by night and her wiles are to be guarded against, else, if the saunterer yield to her seductions, loss of property and loss of health may follow—

'Then shall thy wife thy loathesome kiss disdain,
And wholesome neighbours from thy mug refrain.'

At night, unless great vigilance is used, snares, pitfalls, and evils of all sorts bring grief to the pedestrian; if, however, he escape them the very enhancement of the danger increases the pleasure of the stroll. Among other things the poet classes with the enjoyments of walking the advantages coming from the enlarged acquaintance with the city and country which it gives, both from observation voluntarily made and that information thrust upon one by advertisers. In the same category with walking is running, of which an old poet says:—

'In rennynge the exercise is good also,
To smyte first in fight, and also whenne,
To take a place our foemen will forrenne
And take it erst, also, to serche or sture,
Lightly to come and go, rennynge is sure.
Rennyng is also right good at the chase,
And for to lepe a dike is also good;
For mightily what man may renne and lepe,
May well devict, and safe his party kepe.'[2]

§ 51. An exercise with which society is intimately concerned is that of dancing. Its pleasures are chiefly the associated delights of sexual gratification and society:—

'For love's maze it is the curious plot,
And of man's fellowship the true love knot.'[3]

In Soame Jenyn's poem on dancing, these two are almost the only varieties of pleasure alluded to in connection with the exercise;

[1] Book II

[2] Cotton.

[3] Davies.

and these are very skilfully portrayed in all their details, differentiations and changes. The display of female charms and loveliness seems in this poet's eyes the great utility of dancing, both on the part of her who exhibits and of him who partakes of the feast prepared for him. But incomparably the most exquisite treatment of this terpsichorean art is by Sir John Davies. With him society and sexuality cover the largest aggregates of the pleasures of dancing, but the range of associations is much wider than in the poem of Jenyns. Davies with great effect makes use of the motion and rhythm throughout nature as suggesting dancing and as maintaining an alliance with it. The heavenly bodies, the earth, fire, and air, maintain a rhythmical motion. With dancing is associated music, 'dancing's only life;' the Graces were born 'that their sweet presence dancing might adorn;' 'Merry Bacchus practis'd dancing too;' the march in war suggests dancing; dancing appertains both to the funeral and the wedding; 'Concord's true picture shineth in this art.'

Leigh Hunt has written an interesting sketch of 'Dancing and Dancers,'[1] in which he associates dancing with youth and youthful spirits, and recommends it as a means of keeping alive the fresh feelings of youth and of making the old young.

§ 52. Among the most highly representative pleasures of exercise are those of travelling, and as illustrating its delights and advantages I will refer to a paper by Henry T. Tuckerman.[2] Much as I would like to quote space forbids; but to one who would seek illustration of the pleasures of travel I can recommend no better resort than to this paper. As a scientific account I know of nothing more valuable upon the subject, though the author does not profess to be a psychologist, and though this paper was evidently written for the general reader.

§ 53. Thomson's 'Castle of Indolence' mingles pleasures and pains of inaction. Much of the force of Armstrong's descriptions of the pleasures of exercise is derived from the contrasts he draws between them and the pains of inaction; so that with the description of the one there goes hand in hand a description of the other, as will readily enough be seen if the reader will take the trouble to turn back a few pages to the extracts from the 'Art of Preserving Health.' There are also in the poem some direct references to indolence and its discomforts, as

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[1] *The Seer*, Vol. II.

[2] *The Optimist*, Travel (N.Y., 1850).

'The sons of indolence with long repose
Grow torpid; and with slowest Lethe drunk!
Feebly and ling'ringly return to life,
Blunt every sense and pow'rless every limb.'

Illustrations of the pains of inaction very largely involve the pleasures and pains of occupation and idleness, which will receive their treatment in the next chapter. The more presentative afflictions are those of disintegration of the body and loss of vitality, and none of the various portrayals of these effects as following from lack of exercise show any peculiarities.

A striking example of the wretchedness of inability to move is found in Prescott's 'Charles V.,' where the miserable condition of the emperor at Yuste in respect of power to exercise is made so apparent by contrasting therewith his former strength, and the delight he was wont to take in manly exercises: 'In early days Charles had been passionately fond of field sports. He would follow the chase with such eagerness as to leave his attendants far behind, and sometimes to lose himself among the mountains. When he found his way back, led by some peasant guide late in the evening, lights were in the windows of all the houses and the bells were ringing to call the people together to go in search of him. These were the days when he was accounted "the most perfect cavalier of his time;" when a soldier chronicler would lament that, "the best light-horseman in the world was spoiled by Charles having been born to a throne." It was in these days that he carried off the prizes at the Moorish tilt of reeds, and at the Christian tourney; when, it was said, he even coveted the honours of the *matador*, and, with the national spirit of the old Castilian, would descend into the arena and contend against the bull. But all this was changed; and many a year had passed since the emperor had mounted his war-horse, or followed the chase in the German forests or the wild passes of the Alpuxarras. In place of his noble steed he had brought with him to Yuste only a one-eyed pony and a mule. Once only did he venture into the saddle, when he was seized with a giddiness which compelled him hastily to dismount. The poor emperor was as little able to ride as to walk. Henceforth his only mode of conveyance when he went beyond the boundaries of the garden was the litter or the arm-chair—most frequently the latter—borne by his attendants. Yet he would still occasionally endeavour to revive the recollections of his sporting days by an excursion into the neighbouring woods, where he would do some execution on such birds as came within the range of his fowling piece. Gastelu, in a letter dated the fifth of June, mentions with great satisfaction that his master had been strong enough to rise from his seat without aid and shoot two pigeons with his arquebuse.'[1]

§ 54. The works and passages heretofore referred to are amply sufficient to exemplify the pains which are associated with exercise. Dr. Armstrong's many cautions point to the ills which attend upon careless and imprudent exercise. In the athletic games of the 23rd Iliad the battering received by the combatants at 'Buffets,' and shocks and wounds suffered in the tournament recounted by Scott in 'Ivanhoe,' bespeak another kind of grief attendant upon exercise. Gay's 'Trivia' illustrates the pains of pedestrianism not less than the pleasures; for all the directions given 'to walk clean by day and safe by night' are each a rule to avoid a pain or annoyance likely to beset the path of the viator.

§ 55. The pleasures associated with the pains of inaction and inability to move, being no other than the pleasures of repose, will receive attention under the following caption.

REPOSE—IRRITATION AND RESTLESSNESS.

§ 56. The pleasures of repose maintain a close connection with the pleasures of exercise, for it is only when either one has been tested and satiety follows that the other comes into existence. In order that there may be enjoyment of genuine repose, exercise must have taken place to the extent of fatigue; while in order that exercise may be appreciated, repose must have degenerated into a painful experience. It cannot be said that exercise is more distinctively and generally a pleasure than is repose; both are required by the appetitive cravings of the human system. No other couple can be found of the primary pleasures whose members bear to each other the relationship which exists between these two. While the opposites of the primary pleasures other than exercise are pains with which are associated some pleasures, none of these latter have great enough importance to demand a separate rank in the general list. The opposites of exercise, however, include not alone a painful state, but also a pleasurable one of as great value and as necessary to happiness as any which is connected with exercise itself. The pleasures of the one alternate with the pleasures of the other, and the pains of the one suggest the other as a means of relief.

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[1] Vol. III. p. 417. Boston, 1857.

§ 57. All the primary pleasures are associated more or less with the pleasures of repose, but the latter seems to be more distinctively allied with those groups which follow it in the catalogue which has been given, namely, repletion and digestion, society and sexual gratification. The groups which precede repose in like manner seem to have an affinity, nervous vitality, respiration, light and heat, and integrity of the body, being more generally connected with movement and exercise. Of the latter the pleasures of robust health, of daylight, of respiratory freedom, and of that pushing, overflowing energy marked by great vitality, seem to be the more natural concomitants. Repose, however, finds its friendships with the comforts of repletion, the quiet social enjoyments or the more intense delights of sexual relations. But too much value must not be placed upon such a division, for health is as necessary to repose as it is to exercise, and then all the pleasures which are attached to those of health have their part in the associations of rest; while the association between exercise and repletion is one of the most direct and obvious which can be pointed out; and it cannot be said that repose is any more a factor in the pleasures of society than in those of solitude. It is to be further noticed that the pleasures which we have found in connection with most of the primary pains heretofore referred to are those of the general character of repose combined with society. Disintegration of the body, darkness, prostration, inaction, all are alleviated by repose. The pains of suffocation in a less degree suggest repose as an amelioration ; but even in this case it has been already observed to be present with such an office where the suffocation is a gradual one, as in consumptive diseases of the respiratory system. On the other hand, so far as the pains of hunger and thirst and sexual oppression have associated pleasures, these will be seen to be of the general character of those of movement and exercise ; and to some, though in a less degree, the associated pleasures mitigating the pains of solitude.

§ 58. Antagonistical to the pleasures of repose are the pains of irritation, restlessness, or fever. Perhaps the typical pain is that of sleeplessness or feverishness. In close association are the pains of disintegration and prostration. Cold and suffocation may be considered a little more remote; solitude still more so ; while hunger and thirst and sexual oppression follow hard upon the two first named, being often very prominent in the association with irritation, one or the other in fact frequently constituting the irritation and restlessness.

§ 59. Associated with the pleasures of repose are the pains of inaction, to which allusion is made elsewhere. The pleasures which are joined with the pains of restlessness and irritation are not very direct, and are attendant only upon the milder forms of these discomforts. Restlessness urges to movement, and the more representative pleasures of movement may become associated with the annoyances of irritation. In this way the variety of sensations which change of scene gives, the additional facilities for obtaining food which come from a knowledge of the world, the charms of society and the advantages of mingling with one's kind—all may combine or any one may contribute to furnish compensation for the disagreeableness of irritation, and may even be suggested by the latter and take a rise from it.

The pleasures of repose are characteristically pervasive; the pains of irritation are apt to be intense; if long continued they pass into the pervasive pains of prostration.

§ 60. In Thomson's 'Castle of Indolence' we shall find the most ample illustration of the pleasures of repose. Only a few of the associations can be cited:—

> 'A pleasing land of drowsy-head it was,
> Of dreams that wave before the half-shut eye;
> And of gay castles in the clouds that pass,
> For ever flushing round a summer sky;
> There eke the soft delights that witchingly
> Instil a wanton sweetness through the breast,
> And the calm pleasures always hovered nigh;
> But whatever smack'd of noyance, of unrest,
> Was far off expell'd from this delicious nest.'

The Castle of Indolence is hid 'mid embowering trees,' making 'a kind of checker'd day and night.' The joys of the animal creation, 'all but man,' are abundantly those of repose; they are all 'with unearn'd pleasure gay!' Within the domain of indolence there is no need to

> '——Rise at early dawn
> To pass the joyless day in various stounds;
> Or, louting low, on upstart fortune fawn,
> And sell fair honour for some paltry pounds;
> Or through the city take your dirty rounds
> To cheat and dun and lye and visit pay,
> Now flattering base, now giving secret wounds;

Or prowl in courts of law for human prey,
In venal senate thrive or rob on broad highways.

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No dogs, no babes, no wives, to stun your ear ;
No hammers thump ; no horrid blacksmith sear,
No noisy tradesmen your sweet slumbers start,
With sounds that are a misery to hear.

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Here nought but candor reigns, indulgent ease,
Good natur'd lounging, sauntering up and down ;
They who are pleas'd themselves must always please ;
On other's ways they never squint a frown,
Nor heed what haps in hamlet or in town ;
Then from the source of tender indolence,
With milky blood the heart is overflown,
Is soothed and sweetened by the social sense ;
For interest, envy, pride and strife are banished hence.'

These stanzas are fair specimens. In these and others may be noticed a variety of associations. Prominent are shade and coolness, quiet, stillness, leisure, freedom, the luxury of soft coverings, the delights of feasts, abundant and ready supply of wants, sleep, music, love, society, reproductions of interesting events in pictures and tapestry, and all the soothing influences of nature. As always in description, force is lent to the portrayal by reference to the pains of the opposites to what is before the mind as a pleasure. In the Castle of Indolence there is no noisy disturbance, strife, envy, pride, interest, tempest. The association is even carried so far as to include the pleasures of virtue.

§ 61. Ease is exemplified in so many forms that one is perplexed not by the difficulty of finding illustration but by the multitude of illustrations ; and we are very soon carried by them into the regions of the tertiary pleasures. Ease is almost as broad a term as happiness itself. In a more restricted sense, however, it applies to rest or quiet enjoyment as contrasted with dangerous, care-breeding, difficult, and wearying activities. By those upon whom the latter press ease is felt to be a great boon.

§ 62. The name *sleep* evokes, perhaps, the largest number of the associations of repose. Unless, however, we are careful we shall be liable to a misconstruction in speaking of the pleasures of sleep. Sleep itself has no pleasure ; the delights and advantages of this state lie wholly in approaches to sleep and the effect of it : while we are sleeping we are enjoying nothing, save perhaps dreams ; the enjoyment arising when cares are laid aside, and body and mind are disposed to rest, and the refreshments after sleep constitute then the pleasures of sleep. In this light of viewing the subject it will be seen that full descriptions of sleep would include almost all, or quite all, the enjoyments of repose.

We have a fine illustration of the mind's natural inclination to express one pleasure in terms of others in the favour which Sancho Panza's commendation of sleep has received—received because of its vividness and force of expression, bringing to the mind clearly and impressing strongly the blessings of that state. We might add that there is demonstrated from this and similar examples the fact of the mind's incapacity to describe one pleasure in any way save in terms of other pleasures. The only way we can understand or comprehend a pleasure is by feeling it, and terms which revive it are the only ones of use to describe it; so that any language recalling other pleasures associated with it is apt to renew and represent the original pleasurable experience. We may have one word (or a plurality of words) to stand for a particular pleasurable feeling; this will serve to represent such a feeling; if we essay description we can only use terms which bring up masses of association of which the pleasure we are describing forms a part. Further, in studying the rationale of description, great use is to be made of the fact of the kinship of all pleasures in raising vitality; so that one pleasure may be expressed in terms of the other upon this ground of community—*a* increases vitality in the same ratio as does *b*, *a* has the same effect in the system as *b*, therefore I may express the effect of *a* by saying it is *b*. With these remarks the reader can profitably re-peruse the famous passage from Cervantes which has suggested them:—

'Blessings light on him that first invented sleep! It covers a man all over, thoughts and all, like a cloak; it is meat for the hungry, drink for the thirsty, heat for the cold and cold for the hot; in short, money that buys everything, balance and weights that make the shepherd equal to the monarch, and the fool to the wise; there is only one evil in sleep, as I have heard, it is that it resembles death, since between a dead and sleeping man there is but little difference.'[1]

§ 63. Associated with the pleasures of sleep are those of dreaming: 'And sleep too, hath its sports and its diversions, its wild indefinable dreams; fantastic scenes which fancy's finger sketches in the dark distorted reflection of the business of life on the

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[1] *Don Quixote*, VIII. 68.

camera obscura of the brain. Oh, kind and blissful mockery, when the manacled felon on his bed of straw is transported to the home of his innocent boyhood, and the pining and forsaken fair is happy with her fond and faithful lover,—and the poor man hath abundance—and the dying man is in joyous health—and despair hath hope—and those that want are as though they wanted not—and they who weep are as though they wept not!'[1]

§ 64. Among the delights of repose, the enjoyments of waking dreams or reveries are not to be counted as small. These are more frequently associated with the pleasures of darkness perhaps than with those of day, but day dreams are not uncommon and are not wanting in seductiveness.

The pleasures of reverie are allied with solitude as well as repose, with warmth and with alimentation, as in the case of those dreaming-pleasures dependent upon influences coming through the digestive system, like the reveries of the opium-taker.

§ 65. Let us now pass to the pains of irritation and restlessness. I quote first from Black's 'The Ten Laws of Health' the following passage:—'Sleep is the great rejuvenator of the nervous energies, the winder up of force in the nervous coils of the brain, which gives a good running power for the day. Deprive the brain of the time required for the restoration of its energies, and there is experienced at first a dull, heavy, inert feeling, often accompanied by headache and a lifeless, unrested condition of the whole body. Continue this longer and more serious evidences of mischief begin to be manifested. The state of the blood, the time of life, and the inherent strength or weakness of the nervous system determine the nature of the mischief which prolonged lack of sufficient sleep brings on. In very young persons convulsions, congestion, and acute inflammation of the brain are very likely to occur; but when the lack of sleep is not so great but more protracted, the child either acquires a stupid, listless manner or a very irritable nervous one bordering upon actual disease. Later in life the deprivation of an adequate amount of sleep keeps the brain in a state of forced activity, its tissues become redder than natural, and various uneasy sensations are felt in the head of a dull, heavy character bordering upon acute pain. Connected thought becomes almost impossible, and the entire body sympathises and suffers by the lack of nervous tone. If yet further prolonged, the slight derangement passes into disease; in those with impure blood into a low form of nervous fever with delirium; and in those with pure blood into acute insanity, congestion, and softening of the brain, or into an attack of apoplexy or paralysis.'[1]

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[1] Anon.

The restlessness of disease, which is often indicated by the term fever, has already received some illustration in what I have found it convenient to cite as indications of the pains of disintegration and prostration.

§ 66. We will close our samples of the pains of this class (of course no pretension is made to exhausting the subject or of doing anything more than giving a few examples) by reference to some of the more representative pains of irritation. The grumbling habit furnishes a ready specimen, and the following extract from a 'Bible Class Magazine' shall supply us with a description of some of its evils:—'The steady "grumble, grumble, grumble," like the dull drip down the waterspout on a "heavy day" that has not the liveliness to rain, like the grinding of a hearse over unbroken gravel stone, like the grating and "gnawing" of a machine that wants oil: it never benefited a human spirit; it never roused one man to generous action; it never made one pulse leap livelier than before. It is positively a bad and hurtful thing to grumble. It hurts the man himself whose habit it is, not only making him continually uncomfortable in a world which, bad as it is, gives abundant occasion for gratitude and praise, but impairing gradually the freshness and healthfulness of his mind; inducing morbidness of thought; making him gloomy, nervous, and mentally rheumatic and neuralgic; leading him to look upon society and the Church, not with the open soul that hatches the sunshine as well as the cloud, and rejoices in the manifold melodies that mingle with the too frequent discords, but with the shut, glooming, self-centering soul that looks out only through glasses of green, and is for ever alive to the perception of discords. It hurts the man's influence as well as his character. It repulses others from him, and prevents them from doing him the good which they might. . . . Attracting nobody—silently, but really, repelling all—it gradually undermines one's total influence, and leaves him an isolated, inefficient unit in the community of men whom he might greatly benefit, perhaps, but who love warm-heartedness and life, largeness of view, fulness of sympathy, and self-reliance.'

§ 67. The pains which are associated with repose are, it has been said, the pains of inaction, and these have already received exposition. But there is one class of these pains which would not be likely to receive attention among the pains of inaction, namely, the evils which befall one in sleep. Such are casualties which occur when consciousness is absent, and thus there is inability to defend one's self. The assaults of the midnight assassin or the spoliations of the thief are instances; so also the infection of pestilence and disease which is received into the system during the sleeping hours. Moreover the hours of unpleasant dreams are to be ranked in the same category. The terrible phantoms which arise in the brain of the opium-taker during his reveries mingle pains with the pleasures which this narcotic occasions.

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[1] J. R. Black, M.D.: Phila. 1872, p. 300.

§ 68. It is quite certain that some of our most valued pleasures are very intimately connected with great pains. This is not merely to reiterate the general truth that without pain there is no pleasure, and the converse, but it is to say in addition that, with the representations of our worst pains, accompanying pleasures are also represented; so that in thinking of a group of pains we intermingle very many pleasurable concomitants, which seem to ally themselves with the pains and form a part of the aggregate. If this were not so, I am not sure that we should at all tolerate the memory of pains, and there is no question that in the recollection of pains it is after all the associated pleasures that we dwell upon. We do not think so much of our sickness as we do of its alleviations, and the superior happiness we felt when we recovered from it. To such a law of pleasure and of pain the present topic furnishes no exception. With the pains of irritation are associated pleasures of relief, which we should not have felt were it not for the pain. In the language of Burns:—[1]

'When fevers burn or ague freezes,
Rheumatics gnaw or colic squeezes,
Our neighbour's sympathy may ease us,
Wi' pitying moan.'

The same fact is chronicled by Talfourd:—[2]

'——'Tis a little thing
To give a cup of water; yet its draught
Of cool refreshment, drained by fevered lips,
May give a shock of pleasure to the frame
More exquisite than when nectarean juice
Renews the life of joy in happiest hours.'

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[1] *Address to the Toothache.*

[2] *Ion.*

In a similar way verses of Sidney Dobell's poem, 'Home, Wounded,' are descriptive of the happiness that may relieve the pangs of irritation—the wounded and suffering soldier recounts how the memory of his deeds will be precious to those who love him, and this to him is a source of joy which surpasses and almost quenches thought of his suffering.

Thoughts, giving pleasure, may subsist even in the immediate presence of pain, and may furnish associations of a pleasurable character which attach themselves to the representations of painful irritation.

§ 69. Another instance, and a very marked one, of pleasure with the association of painful irritation is that enjoyment which sometimes comes from flagellation; the pain is certainly present, but not strong enough to overcome the pleasurable excitation of appetite; the latter is so delightful as to make the subject eager to arouse it, though at the expense of the soreness and abrasions caused by the rod.

§ 70. I will close the present member of this chapter with the short poem of Mrs. Browning, which exhibits in an extraordinary degree the value of the blessings of repose. A being having all the resources of divinity to confer gifts, and having the desire of a lover to bestow the best of boons upon the recipient of his affections, giveth his beloved—Sleep.

'What would we give to our beloved?
The hero's heart to be unmoved—
The poet's star-tuned harp to sweep—
The Senate's shout to patriot vows—
The monarch's crown to light the brows?
"He giveth his beloved Sleep."

"Sleep soft, beloved!" we sometimes say,
But have no power to charm away
Sad dreams that through the eyelids creep;
But never doleful dream again
Shall break their happy slumber when
"He giveth his beloved Sleep."

O earth so full of dreary noise!
O men with wailing in your voice!
O delved gold, the wailer's heap!
O strife, O curse, that o'er it fall!
God makes a silence through you all,
And giveth his beloved Sleep!

Yea! men may wonder while they scan—
A living, thinking, feeling man

In such a rest his heart to keep!
But angels say,—and through the word,
I ween, their blessed smile is heard,—
"He giveth his beloved Sleep."'

ALIMENTATION.

§ 71. The pleasures of repletion and digestion, and the pains of hunger and thirst and failure to nourish, all of which may be indicated by the general term alimentation, will next engage our attention. Since food is recognised as the fuel to feed the vital fire, and the absence of food is so closely connected with failure of all the vital forces, it is evident that all the pleasures and pains of this division have a very wide range of association. With the pleasures of repletion and digestion are intimately associated the pleasures of functional vitality and bodily integrity, those of heat, and more remotely those of light and respiration, the last two chiefly through associations of general vitality and integrity. On the score of activity necessary for procuring food the delights of movement and exercise are joined; while the necessity of repose for the processes of digestion, and the comfort and quiet which repletion brings, associate the enjoyments of repose also with those now before us. The pleasures of the convivial table and society; the stimulus to the seminal secretions which repletion occasions attach likewise the sexual amenities.

§ 72. On the other hand, with hunger and thirst, inanition and failure to nourish, are associated proximately prostration, disintegration, cold; the pains of suffocation and darkness are remotely connected with the present through the ills of prostration, disintegration and cold; with the pains of solitude we frequently connect those of starvation, and in the train of solitude follow the representative ills of sexual denial. With the more presentative pains of sexual oppression, those arising from an ungratified desire when the organs of procreation are replete I am able to see no association; rather those pains would seem to attach themselves to a state of repletion, for when the general bodily forces are low, the sexual energies are low also. Pains of sexual impotence might properly be immediately connected with inanition.

§ 73. With a state of repletion, and with the methods of securing that which brings repletion, there are pains associated as well as pleasures. One set of evils has just been suggested, namely those of sexual oppression. Another is found in some of the pains of inaction, which latter repletion is apt to promote. A large class of pains which belong to eating and drinking I have placed under the head of 'failure to nourish,' considering that under repletion and digestion are to be understood not merely the taking of food pleasant to the taste but also food capable of assimilation, digestion being so closely involved with repletion that the two are inseparable. Many of the pains of excessive conviviality can hardly be separated from those of inaction. Some are most directly allied with prostration, and others proximately with this class of pains arising from failure to nourish, and ultimately with pains of disintegration and prostration. Other pains connected with alimentation are the pains of activity directed to the procuring of food, including all the predatory dangers and sufferings.

§ 74. Hunger and thirst would not seem to have pleasures growing up with them; yet we hear of the enjoyments of a good appetite, the pricking of hunger giving an eagerness for food which increases the relish, and it might be said that hence we have on this account pleasures associated with the pains of the character which have been described; these pleasures, however, are really direct pleasures of repletion and digestion only enhanced by the previous experience of the opposite pain. Perhaps, however, in some cases there is a pleasurable association between a state of hunger and a good meal, experience having shown that the former is speedily followed by the latter, so that representations of the former are made pleasurable by the closely connected representations of the latter. But in the case of representations of great gain to be secured or already secured by self-denial, even to the extent of hunger and thirst, we have a proper case of pleasure associated with these pains. Privation may be a positive preference where, by that privation, another one's friend, family, or country is to be benefited. To the pains of failure to nourish, as in other cases of weakness, prostration, and sickness, the pleasures of society may furnish alleviation. The pleasures of repletion and digestion are characteristically pervasive; the opposite pains are either intense or pervasive, so that the preference cannot be given to one term more than the other as characterising them.

§ 75. 'We eat to live; and if we eat wisely of what He has provided Who giveth us all things richly to enjoy, we shall live well, healthfully and long. . . . We eat to live, and life is warmth, growth, repair, and power to labour. The first necessity of human existence is warmth, alike indispensable to infancy, manhood, and old age. At every period of life, at all seasons of the year, in the tropics and at the poles, the human body in health maintains the same temperature, which is about 98 Fahrenheit. This warmth is derived from the food we eat; and that which yields heat in large proportions is called 'carbonaceous,' answering to one of the simple original elements, 'carbon,' the more familiar representative of which is charcoal. Carbon or charcoal burned before our eyes gives out heat; when taken into the system in the form of food, it undergoes a process of burning there also, and throws out a warmth which, diffused over the body, is called *vital heat*. . . . We not only eat to keep warm, we eat to grow. . . . We not only eat for purposes of warmth and growth, but we eat for repair. . . . We not only eat for warmth and growth and repair, but for the generation of those internal forces of brain and body, of thought and action, of voluntary and involuntary motion, which together constitute man's efficiency as an immortal being. All now understand that food gives nourishment, and nourishment includes warmth, growth, repair, and strength or power to work as to body and brain. . . . A good feeder makes a good worker; hence the poorest of all economy is the stinting of those who are employed to do work; and not only does a man become unable to do a good day's work on a scanty allowance of food, but he requires time for recuperation; for after you begin to feed him well, several days are needed to enable him to come up to his proper work. And what has been said of power of body is equally true as to the brain, for the man who studies hard must eat abundantly, else not only debility of body follows, but the brain begins to consume itself, to feed on its own substance,—many a man has thought himself to death. The intense thinking made the brain feed upon itself because nutriment was not supplied to it fast enough by generous food and a healthful and vigorous digestion; for, as digestion fails, the brain ceases to work clearly, legitimately, logically, and to advantage. There is a consumption of the brain as well as of the lungs, and both mean death unless wise remedies are applied and in a timely manner. . . . We eat for power to work.'[1]

'You eat and drink, but you do not know the *art* of eating and drinking; nay, most probably you despise those who do. "Give me a slice of meat," say you very likely. "And a fig for your gourmands." You fancy it is very virtuous and manly all this. Nonsense, my good sir; you are indifferent because you are ignorant, because your life is passed in a narrow circle of ideas, and because you are bigotedly blind and pompously callous to the beauties and excellencies beyond you.

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[1] W. W. Hall, *Health by Good Living*. New York, 1870.

'Sir,—*Respect your dinner*; idolise it, enjoy it properly. You will be by many hours in the week, many weeks in the year, and many weeks in your life the happier if you do.

'Don't tell us that it is not worthy of a man. All a man's senses are worthy of employment, and should be cultivated as a duty. The senses are the arts. What glorious feasts does nature prepare for your eye in animal form, in landscape, and painting! Are you to put out your eyes and not see? What royal dishes of melody does her bounty provide for you in the shape of poetry, music whether windy or wiry, notes of the human voice, or ravishing song of birds? Are you to stuff your ears with cotton, and vow that the sense of hearing is unmanly?—You obstinate dolt, you! No, surely, nor must you be so absurd as to fancy that the art of eating is in any way less worthy than the other two. You like your dinner, man; never be ashamed to say so. If you don't like your victuals, pass on to the next article; but remember that every man who has been worth a fig in this world as poet, painter, or musician has had a good appetite and a good taste.'[1]

§ 76. I subjoin nine aphorisms which call to mind the pleasures of eating:—

'I. The universe without life would be nothing, and all that lives must feed.

II. Animals feed; man eats; the man of intellect alone knows *how* to eat.

III. The fate of nations depends upon how they are fed.

IV. Tell me what you eat, and I will tell you what you are.

V. The Creator, in making it obligatory on man to eat to live, invites him thereto by appetite, and rewards him by the pleasure he experiences.

VI. Good living is an act of our judgment, by which we give a preference to things agreeable to taste, to those which do not possess that quality.

VII. The pleasures of the table are for all eyes, all conditions, all countries, and of great variety; they are the concomitants of all other pleasures and when all the rest are gone they remain to console us for their loss.

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[1] W. M. Thackeray, *Early and Late Papers; Memorials of Gormandising*. p. 6. Boston, 1867.

VIII. The dinner table is the only place where men are not bored during the first hour.

IX. The discovery of a new dish does more for the happiness of mankind than the discovery of a new planet.'[1]

§ 77. The same author, whose work it should be said is based upon Brillat-Savarin, has in several parts thereof given very full descriptions of the pleasures of alimentation. The following are some of the most suggestive passages:

'Repasts, in the sense which we give to the word, commenced with the second era of the human race, that is to say, when it ceased to live upon fruits. The preparation and distribution of food rendered a meeting of family necessary; the fathers distributed to their children the produce of their chase, and in their turn adult children rendered the same service to their parents.

These meetings, limited at first to blood relations, extended gradually to friends and neighbours.

At a later period, as the human race increased in number, the weary traveller would find a seat at those primitive repasts and relate the sights he had seen in foreign lands. Thus was hospitality born with rights held sacred by every nation; for no matter how ferocious the race, it held it a sacred duty to respect the life of the man who had eaten its bread and salt.

It is during repasts that language must have been improved, because men continually met and confidence and conversation were the result.

Such must have been, from the nature of things, the elements of 'the pleasures of the table,' which is perfectly distinct, let it be understood, from 'the pleasures of eating,' which is its necessary antecedent.

The pleasure of eating is the actual and direct sensation of a want which is satisfied.

We share the pleasures of eating in common with animals: it simply implies hunger and wherewithal to satisfy it.

The pleasures of the table are peculiar to the human race. It premises preparation beforehand for the repast, the locality, and the selection of guests.

The pleasure of eating requires, if not hunger, at least appetite; the pleasures of the table are generally independent of both.

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[1] *The Handbook of Dining*, Chap. I. London, Simpson, 1859.

Both states may always be observed at our banquets.

At the first course men eat eagerly, without speaking or paying attention to what may be said; and whatever be our rank in society, we forget everything to set to work like the others. But when our cravings begin to feel satisfied reflection sets in, conversation opens, a new order of things commences, and the man who up to this point was only an eater becomes a more or less agreeable companion, according to the means given him by the Master of all things.

The pleasures of the table do not consist in transports of delight or ecstacies: but they gain in duration what they lose in intensity, and have the peculiar privilege of disposing us to all others, or of consoling us for their loss.

And, in sooth, after a good dinner soul and body feel happy and comfortable.

Physically, whilst the brain is lighter, the countenance brighter, the colour rises, the eyes sparkle, a warm heat runs through our veins. Morally, the intellect is brighter, the imagination warmer, and wit and humour follow.

Moreover, we often find assembled round the same table all the modifications which extreme sociability has introduced amongst us. Love, friendship, business, speculation, power, solicitations, protection, ambition, intrigue; hence conviviality concerns everything; hence it produces fruits of every flavour.'

That great work of Athenæus,—'The Deipnosophists,' abounds in illustrations of the pleasures of alimentation.

§ 78. The power of gastronomical pleasures as motives is set forth by Lord Byron in the familiar lines:—

'Of all appeals,—although
I grant the power of pathos and of gold,
Of beauty, flattery, threats,—a shilling—no
Method's more sure at moments to take hold
Of the best feelings of mankind which grow
More tender, as we every day behold,
Than that all softening, overpow'ring knell,
The tocsin of the soul—the dinner-bell!'

§ 79. We have heretofore been considering chiefly the pleasures of eating; we will now, in the quotation of two or three bacchanalian songs, or songs in praise of conviviality, exhibit some of the pleasures of drinking, to conclude with these the first branch of the present subject. The first is from the 'Universal Songster':—

'Bacchus, god of joys divine!
Be thy pleasures ever mine
Smile on this thy votary's prayer,
All else is not worth our care;
All our griefs brisk wine dispels,
Drinking every trouble quells.

When the goblet full is filled,
From the clustering vine distilled,
Then, indeed, I'm truly blest,
And ev'ry anxious thought's at rest;
While its potent juice I quaff,
Still I sing and dance and laugh.

Would you be for ever gay,
Mortals, learn of me the way;
'Tis not beauty, 'tis not love,
Will alone sufficient prove;
If you'd raise and charm the soul,
Deeply drain the spicy bowl.'

The pleasures chiefly dwelt upon in the above are those of cheerfulness and elation, with corresponding absence and abatement of care and trouble. The same delights are very beautifully depicted in the succeeding stanzas with the joys of repose and of love superadded, and the whole carried to that degree of exaltation which enables the happiness to suggest that of heaven:—

'Boy, bring my glass!—It lights a gleam,
  O'er Life's too gloomy shade,
There, still, through Hope's illusive beam,
  The world's in charms array'd;
There, fairer visions court my eyes,
  Light beats my playful breast;
My joys to flattering transports rise,
  My cares in slumber rest.

Oh! 'tis a balm, in mercy given,
  To cheer the weary'd mind:
To turn the grateful eye to Heaven,
  That comforts thus mankind.
It prompts the just absolving thought
  That heals the suffering breasts,
Sees Heaven's design with blessing fraught,
  And man from misery wrests.

Then tell me not "The sparkling bowl
  Degrades the mental power;
Obscures the heavenly beam of soul
  And speeds our mortal hour."

When fitly used, the spirit shines,
  Sublimed with purest fire;
The balm each power of soul refines,
  And lifts Life's limit higher.

When memory turns to Ella's eyes,
  And starts the tear in mine,
How glowing from my cup they rise,
  While passion paints in wine!
What melting softness clothes her charms,
  When through my glass I gaze!
What promised joys my fancy warms,
  While thus my hopes I raise.

No! While the heavenly vision opes
  Before my charmed eyes,
I'll raise the dream of joys and hopes
  My magic cup supplies.
Boy, bring the charm! with tints of bliss
  It colours earthly woe,
And shows in weary worlds like this
  A glimpse of Heaven below.'[1]

With the foregoing, the social pleasures are associated. Still another advantage—that of stimulating genius—is celebrated.

In an old drinking song in Ritson's Collection[2] the power of the bowl to dispel fear and inspire courage is the burden of the first lines:—

'The man that is drunk is void of all care,
He heeds neither Parthian quiver nor spear;
The Moor's poison'd dart he scorns for to wield;
His bottle alone is his weapon and shield.'

The bottle also fortifies against heat; likewise it is an antidote to cold. Ben Jonson seems to think that in a state of intoxication the summit of bliss is achieved.

§ 80. The article on 'Starvation,' in Chambers' 'Encyclopedia gives the following effects of starvation, which may be taken as a fair description of the more presentative pains of hunger and thirst, and inclusive of the more prominent phenomena of inanition: '1. Dropsical effusions. 2. Softening and destruction of the mucous membrane. 3. Blackening of the viscera, especially of the liver. 4. Bluish, livid, yellow, and reddish stains during life in the transparent parts of the skin. 5. Hectic fever and a continuous decrease in the power of the body to resist cold. 6. At first a scanty excretion of dry, bilious, grass-green fæces, and afterwards diarrrhœa of liquid saline matter. 7. Convulsions similar to those in death by hæmorrhage. 8. Death by starvation seems to be in reality death by cold; since the temperature of the body is not much diminished until the fat is nearly consumed, when it rapidly falls, unless it is kept up by heat applied externally. 9. Young animals succumbed far sooner than adults. 10. The results of insufficient food were in the end the same as those of total deprivation; the total amount of loss being less, so that a longer time was required to produce it. . . . In the first place pain is felt in the stomach, which is relieved on pressure. The countenance becomes pale and cadaverous: the eyes are wild and glistening; the breath hot, the mouth parched, and the saliva thick and scanty. An intolerable thirst supervenes, which if there be no access to water, becomes the most distressing symptom. The body becomes gradually emaciated, and begins to exhale a peculiar fœtor, while the skin becomes covered with a brownish dirty looking and offensive secretion almost as indelible as varnish, which Donovan at first mistook for encrusted filth. The bodily strength rapidly declines; the sufferer totters in walking, like a drunken man; his voice becomes weak and whining, and he is ready to burst into tears on the slightest occasion. In the cases recorded by Donovan imbecility, and sometimes almost complete idiocy, ensued.'

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[1] *Lyra Urbanica* (Morris), London, 1840.

[2] London, 1783.

§ 81. The following verses are from Dryden:—

> 'Famine so fierce that what's denied men's use,
> E'en deadly plants, and herbs of poisonous juice,
> Wild hunger eat; and to prolong our breath,
> We greedily devour our certain death.
> The soldier in the assault of famine falls,
> And ghosts, not men, are watching on the walls.'
>
> 'He daily dies by hours and moments,
> All vital nourishment but air is wanting;
> Three rising days and two descending nights
> Have changed the face of heaven and earth by turns,
> But brought no kind vicissitude to him—
> His state is still the same; with hunger pinch'd,
> Waiting the slow approach of his death,
> Which, halting onwards as his life goes back,
> Still gains upon his ground.'

§ 82. Some of the evils of failure to nourish are shown in the subjoined extracts from the article on Indigestion in Rees's 'Cyclopædia':—

'The symptoms which characterise idiopathic dyspepsia are an irregular, but commonly deficient appetite, with occasional squeamishness, sometimes actual vomiting; a sense of load and distention of the stomach after meals, followed by eructations of air, or of solid or fluid matter of various qualities, acid, pungent, inodorous or insipid; heartburn and pains in the region of the stomach. Some or all of these symptoms occur at different times or in different individuals, and are commonly combined with irregularity of the bowels, which are most frequently costive, but sometimes lax, or in each of these states by turns. The mouth and throat are usually dry, especially in the morning, and the tongue is at the same time furred and of a white or yellow colour, and there is a disagreeable taste on the palate. . . . But, in addition to these morbid sensations, are phenomena in the stomach itself; an infinite variety of symptoms occur in different instances, indicating the sympathetic affection of the constitution at large, or of particular organs. These have commonly been called *nervous* symptoms, inasmuch as they have originated merely from a sympathy of parts, independently of any disordered state of the circulation, or of any morbid change in the structure of the suffering organs; and they are often more distressing than the primary symptoms belonging to the affection of the stomach. Among the symptoms to which we allude are languor, sluggishness and indisposition to exertion, either mental or corporeal, but especially the latter; drowsiness, particularly after meals or slight exercise; giddiness, noise in the ears, occasional dimness of sight, or a sense of objects floating before the eyes, with headache under various forms, most frequently affecting the forehead and temples, sometimes the crown and the occiput; severe flying pains; palpitations of the heart, or intermissions in its pulsation, with considerable variations in the state of the pulse; total restlessness, or unrefreshing sleep during the night, with frightful dreams, the incubus, or night-mare, etc.; temporary absence of mind, impaired memory, unusual timidity and despondency; and in short all the train of complaints which belong to hypochondriasis and hysteria in the constitutions in which they are liable respectively to occur.'

§ 83. To similar effect writes Burton: 'As a lamp is choked with a multitude of oil, or a little fire with overmuch wood quite extinguished, so is the natural heat with immoderate eating strangled in the body. *Pernitiosa sentina est abdomen insaturabile*; one saith, an insatiable paunch is a pernicious sink, and the fountain of all diseases, both of body and mind. Mercurialis will have it a peculiar cause of this private disease; Solenander, consil. 5, sect. 3, illustrates this of Mercurialis with an example of one so melancholy, *ab intempestivis commessationibus*, unseasonable feasting. Cato confirms as much, in that often-cited counsel 21, Lib. 2, putting superfluous eating for a main cause. But what need I seek for farther proofs? Hear Hippocrates himself, Lib. 2, Aphor. 10: "Impure bodies the more they are nourished, the more they are hurt, for the nourishment is putrified with vicious humours."'[1]

§ 84. We will next notice the evils of intemperance in drinking: 'Were there only this single consideration, that we are less masters of ourselves when we drink in the least proportion above the exigencies of thirst; I say, were this all that could be objected, it were sufficient to make us abhor this vice. But we may go on to say, that as he who drinks but a little is not master of himself so he who drinks much is a slave to himself. As for my part, I ever esteemed a drunkard of all vicious persons the most vicious; for if actions are to be weighed and considered according to the intention of them, what can we think of him who puts himself into a circumstance wherein he can have no intention of all, but incapacitates himself for the duties and offices of life, by a suspension of all his faculties? If a man considers that he cannot, under the oppression of drink, be a friend, a gentleman, a master, or a subject; that he has so long banished himself from all that is dear, and given up all that is sacred to him; he would even think of a debauch with horror. But when he looks still further and acknowledges that he is not only expelled out of all the relations of life, but also liable to offend against them all; what words can express the terror and detestation he would have of such a condition? And yet he owns all this to himself, who says he was drunk last night.'[2]

'When this vice has taken fast hold of a man, farewell industry, farewell emulation, farewell attention to things worthy of attention, farewell love of virtuous society, farewell decency of manners, and farewell, too, even an attention to person; everything is sunk by this predominant and brutal appetite.'[3]

§ 85. In the sketch by 'Boz' entitled 'The Drunkard's Death,' occurs a portraiture in more dramatic form of some of the most distressing horrors of drunkenness. The drunkard is introduced as called from a debauch to attend the death-bed of his wife. 'No word of comfort was whispered in his ear, no look of kindness lighted on his face. All shrunk from and avoided him; and when at last he staggered from the room, no one sought to follow or console the widower.

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[1] *Anat. of Melancholy*, Part I. Sec. 2, Mem. 2, Sub. 2.

[2] Steele, *Tatler*, No. 241.

[3] Cobbett.

'The time had been when many a friend would have crowded round him in his affliction, and many a heart-felt condolence would have met him in his grief. Where were they now? One by one, friends, relatives, the commonest acquaintance even had fallen off from and deserted the drunkard. His wife alone had clung to him in good and evil, in sickness and poverty; and how had he rewarded her? He had reeled from the tavern to her bedside, in time to see her die.'

The pains of loss of society are exhibited in the above; now follows a new class of evils: 'He rushed from the house and walked swiftly through the streets. Remorse, fear, shame, all crowded on his mind.' We now pass from representative to more presentative pains. 'Stupefied with drink and bewildered with the scene he had just witnessed, he re-entered the tavern he had quitted shortly before. Glass succeeded glass. His blood mounted and his brain whirled round.' Then follows a description of the poverty and squalor of the drunkard's home, the sickness and misery of his daughter, the hard-heartedness exhibited by the father in dealing with his children—a mixture of the more presentative with the more representative ills. Soon too is brought out a very highly representative evil of the drunkard's estate; in a state of intoxication he gives away to pursuers the life of another and that other his own son who had been hiding with him. After this his daughter deserts him—further loss of society and also of the means of subsistence, since he lived chiefly from his daughter's earnings. Presentative pains are again dwelt upon in the following: 'He begged his bread from door to door. Every halfpenny he could wring from the pity or credulity of those to whom he addressed himself was spent in the old way. A year passed over his head; the roof of a gaol was the only one that had sheltered him for many months. He slept under archways and in brick-fields—anywhere, where there was some warmth and shelter from the cold and rain. But in the last stage of poverty, disease, and homeless want, he was a drunkard still.

'At last, one bitter night, he sunk down on a doorstep, faint and ill. The premature decay of vice and profligacy had worn him to the bone. His cheeks were hollow and livid; his eyes were sunken, and their sight was dim. His legs trembled beneath his weight, and a cold shiver ran through every limb.'

The portrayal now becomes more representative:—

'And now the long-forgotten scenes of a mis-spent life crowded thick and fast upon him. He thought of the time when he had a home—a happy, cheerful home—and of those who peopled it, and flocked about him then, until the forms of his elder children seemed to rise from the grave and stand about him —so plain, so clear, and so distinct they were, that he could touch and feel them. Looks that he had long forgotten were fixed upon him once more; voices, long since hushed in death, sounded in his ears like the music of village bells. But it was only for an instant. The rain beat heavily upon him, and cold and hunger were gnawing at his heart again.'

Finally, the author concludes with the insane fury which preceded, and the terrible circumstances which attended the suicide of the wretched man in the river, horrors which are best appreciated by contrast with the quiet even joy of such a dying bed as Christopher North depicts:—

'When nature feels the solemn hour has come,
That parts the spirit from her mortal clay,
May that hour find me in my weeping home,
'Mid the blest stillness of a Sabbath day!
May none I deeply love be then away;
For through my heart the hushed tho' sobbing breath
Of natural grief a holy calm will send.
With sighs from earth will heavenly voices blend,
Till, as the seraph fair, I smile on death,
Who comes in peace, like an expected friend.
Dipt in celestial hues, the wings of love
Will o'er my soul a generous shade extend;
While, as if air were seen, gleams from above
The day with God, the Sabbath without end.'

§ 86. In addition to what has gone before, I will simply instance, though without illustrating, the pains of delirium tremens, and refer again to the terrors of opium prostration. Both of these furnish examples in point of the pains of failure to nourish, and of injury by the presence of poisonous substances in the alimentary system.

The only illustration I shall give of pleasures associated with hunger is of fasting. Both spiritual and temporal advantages to be derived from abstinence of this character are set forth by Tertullian, from whose treatise on fasting I make one or two extracts:—

'On the other hand he whose "heart" was habitually found "lifted up" rather than fattened up, who in forty and as many nights maintained a fast above the power of human nature, while spiritual faith subministered strength (to his body) both saw with his eyes God's glory, and heard with his ears God's voice, and understood with his heart God's law; while he taught him even then (by experience) that man liveth not by bread alone, but upon every word of God; in that the people, though fatter than he, could not constantly contemplate even Moses himself, fed as he had been upon God, nor his leanness, sated as it had been with His glory! . . . . Such is the prerogative of circumscribed food that it makes God tent-fellow—peer, in truth, with peer!'

' . . . The men of Israel went forth out of Mispeh and pursued the aliens and smote them unto Bethor—the unfed (chasing) the fed, the unarmed the armed. Such will be the strength of them who "fast to God." For such Heaven fights.' 'Thus a Godward fast is a work of reverential awe; and by its means also Hannah, the wife of Elkanah, making suit, barren as she had been before time, easily obtained from God the filling of her belly, empty of food, with a son, ay, and a prophet.

'Nor is it merely a change of nature, or aversion of perils, or obliteration of sins, but likewise the recognition of mysteries which fasts will merit from God.'[1]

SEXUALITY.

§ 87. The pleasures of sexual gratification are not less important than those of the preceding subdivision. The pleasure of the sexual association is peculiar and not susceptible of resolution into any other pleasure; and with this are united many accessory and incidental pleasures. Its close association with the enjoyments of society are apparent, for two persons are required for its gratification, and its genial effects are well known. It is also dependent upon nervous vitality and integrity of the body. Repletion favours it. It occurs and is enjoyed chiefly with repose.[2]

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[1] Roberts and Donaldson's Trans. Vol. III. Edinburgh, 1870.

[2] La copulation, pour être bien faite, veut la complaisance, la tranquillité et le secret.—Debay, *Hygiène du Mariage*, p. 72.

Heat is a powerful stimulant. With the pleasures of light apart from heat it is, perhaps, not more associated than with those of darkness. With the other primary pleasures its connection is more indirect. As concerning its special senses, its joys are chiefly those of touch, sight, and smell.

The ideal pleasures of this group are very far reaching. The emotion called sexual love is not the simple desire for sexual intercourse, but the latter is the groundwork of the former; other forms of love than that between two young persons of marriageable age are more remotely related to the sexual instinct, but are still related. The æsthetic effects of beauty in the human form, attractiveness, social gatherings, scenic representations, poetry, music, and dancing are all ideal pleasures resting in great part upon sexuality. The happiness of the family and domestic joys not less so.

§ 88. The pains opposed to the pleasures just described are of two classes,—those of distension, oppression, restraint; and those of impotence. The former are allied with irritation, solitude, inability to move; the latter more especially with disintegration, prostration, cold, failure to nourish. The latter are the proper opposites of the pleasures of sexual gratification, and the former may be considered as pains associated with those pleasures. But since so many associated delights are dependent upon the gratification itself, and not upon the power to gratify merely, it seems wiser to place in a group together all the pains of sexual denial. Of course the representative pains of this class are those corresponding to the loss of the representative pleasures of sexual gratification. The term *old age* indicates a large group of them.

§ 89. With the joys of gratified sexual desire are connected evils. In a considerable degree, sexual enjoyment entails depletion, loss of vitality, vigour and power. Excess always brings serious weakness. The development of the individual and reproduction are in an inverse ratio. What goes for reproduction is to an extent deducted from the progress of the individual. All the ills that arise from this source, then, must be remembered as offsets to the pleasures of sexuality. Moreover, there are various special diseases consequent chiefly upon illicit or promiscuous intercourse which detract very seriously from the value of its pleasures. Indulgence is obtained in many cases at the expense of loathsome and corrosive maladies which curse the body for life, and for which the enjoyment of the act furnishes no adequate compensation.

Besides, there must also be considered in this relation the pains of pregnancy and childbirth, the rearing of children, and the increased labour, care, and responsibility, coming to both sexes from the maintenance of a family. The latter, however, have their compensatory joys beyond the pleasures of sexual intercourse, which last are very little considered in comparison with more highly representative and more worthy pleasures.

§ 90. The greater vigour, elasticity and power in other directions resulting from sexual denial, are the repaying pleasures associated with the pains. Clearness of intellect, readiness of action, spiritual energy and repose are attached to sexual denial, and if the latter is not too prolonged or too rigid, they generally overmaster the pain. Freedom from all the ills of sexual association also is to be taken into account.

§ 91. The pleasures of sexual gratification are both intense and pervasive; in them we have the best example to be found of the combination in the same experience of a high degree of intensity and a thorough pervasiveness. The corresponding pains of oppression are intense sometimes, but are pervasive to only a slight extent. The pains of impotence are either representative or merged with those of disintegration and prostration.

§ 92. The sexual appetite is so greedy, so apt to run riot, and so readily excited by description and illustration, that exhibitions by pen or pencil of the most presentative sexual pleasures have been always more or less reprobated by mankind. For this cause I shall not venture to make quotations from works which depict the presentative delights of sexuality to their full extent. Such works, however, occur in all languages apart from medical treatises. Perhaps in Greek literature a passage in 'Lucius sive Asinus' of Lucian is the most explicit of any to be found now. This is imitated in Apuleius. In Latin also may be instanced the 'Satyricon' of Titus Petronius Arbiter, the 'Priapeia,' the 'Cento Nuptialis' of Ausonius, and some portions of Lucretius 'De Natura Rerum.' In modern literature there is in French and English a vast amount of erotic prose and poetry which is nameless and without a history. Works are published, circulated and suppressed, and no trace of them is preserved save in extensive libraries and private collections of bibliopoles. There is probably no period when grossly indecent books are not to be found. They minister to a popular want, and though tabooed from prudential reasons nevertheless exist and can be found by the curious.

§ 93. Some books, descriptive of extreme sexual pleasures written by authors who have a high reputation from their other works, or some descriptions contained in books or pieces not exclusively devoted to those subjects, maintain a place in recognised literature. Such are the tales of Boccaccio and La Fontaine, the 'Heptameron' of Margaret of Navarre and 'La Pucelle d'Orleans' of Voltaire, 'Les Contes Drolatiques' of Balzac, 'Les Dames Galantes' of Brantôme, 'Venus and Adonis' of Shakespeare, some of the Shakespearian dramas, and more notably some of the dramas of Dryden, Congreve, Farquhar and Vanbrugh; such also may be considered Byron's 'Don Juan.'

§ 94. Above the descriptions and references to the extreme and final pleasure of sexuality there occur in literature references to the accessories of sexual association, comprising allusions to, and suggestions of, the final pleasure rather than direct reference to it, and also the more representative enjoyments which attend the social intercourse of lovers. In this, as in all erotic delineations, the French easily excel. The works of Parny and Charles Baudelaire furnish plenty of examples. The Greek Romances also, so-called, supply instances, as do the Basia of Johannes Secundus for the Latin tongue (though the latter are not classical Latin). In English Algernon Charles Swinburne is perhaps the most conspicuous author who will answer our call here for illustration, though nearly all of the great English poets have some pieces falling within this category. I quote from Basium XVI. of Secundus:—

> 'Kiss me, press me, till you feel
> All your rapturous senses reel;
> Till your eyes, half closed and dim,
> In a dizzy transport swim!
> And you murmur faintly, "Grasp me,
> Swooning in your arms, oh clasp me!
> In my fond sustaining arms,
> I will hold your drooping charms;
> While the long life-teeming kiss
> Shall recall your soul to bliss;
> And as thus the vital store
> From my humid lips I pour,
> Till exhausted with the play,
> All my spirit wastes away;
> Sudden, in my turn, I'll cry,
> "Oh support me, for I die!"
> To your fostering breast you'll hold me,
> In your warm embrace enfold me;

While your breath in nectar'd gales,
O'er my sinking soul prevails;
While your kisses sweet impart
Life and rapture to my heart.'[1]

In a similar manner writes Swinburne:

'Kissing her hair, I sate against her feet;
Wove and unwove it, wound it sweet;
Made fast therewith her hands, drew down her eyes,
Deep as deep flowers, and dreamy like dim skies;
With her own tresses bound and found her fair—
Kissing her hair.

Sleep were no sweeter than her face to me—
Sleep of cold sea bloom under the cold sea;
What pain could get between my face and hers?
What new sweet thing would Love not relish worse?
Unless, perhaps, white Death had kissed us there—
Kissing her hair.'

§ 95. The associated pleasures indicated in the above quotation are chiefly those concerning the sense of touch. Still more representative are those relating principally to sight and constituting the attractions of beauty as they manifest themselves to the eye. In the following extract from the 'Day Dream' of Tennyson these appear, and with them prominently the associations of repose:—

'Year after year unto her feet,
She lying on her couch alone,
Across the purple coverlet,
The maiden's jet black hair has grown;
On either side her trancèd form,
Forth streaming from a braid of pearl;
The slumb'rous light is rich and warm
And moves not on the rounded curl

The silk star-broidered coverlid
Unto her limbs itself doth mould,
Languidly ever; and amid
Her full black ringlets, downward rolled,
Glows forth each softly shadowed arm,
With bracelets of the diamond bright.
Her constant beauty doth inform
Stillness with love, and day with light.'

§ 96. Beside these I place the succeeding verses of Edmund Spenser wherein with beauty to look upon is associated beauty and perfection of character:—

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[1] Nott's trans.

'Tell me, ye merchants' daughters, did ye see
So fair a creature in your town before?
So sweet, so lovely, and so mild as she,
Adorned with Beauty's grace and Virtue's store?
Her goodly eyes like sapphires, shining bright,
Her forehead ivory white,
Her cheeks like apples which the sun hath rudded,
Her lips like cherries charming men to bite,
Her breast like to a bowl of cream uncrudded,
Her paps like lilies budded,
Her snowy neck like to a marble tower;
And all her body like a palace fair,
Ascending up, with many a stately stair,
To Honour's seat and Chastity's sweet bower.'

§ 97. Still more complex are the associations which the higher forms of love and marriage bring; the pleasures of disinterestedness, trust and protection appearing. The great joy of receiving an entire devotion, a consecration of a human being's life to one's self, together with the reciprocity of feeling engendered, thereby is indicated.

The ennobling effects of love have always been the theme of poets:—

'That it all sordid baseness doth expel,
And the refined mind doth newly fashion
Unto a fairer form which now doth dwell
In his high thought, that would itself excel,
Which he beholding still with constant sight,
Admires the mirror of so heavenly light.'[1]

'So love, fair shining in the inward man,
Brings forth in him the honourable fruits
Of valour, wit, virtue and haughty thoughts,
Brave resolution and divine discourse.'[2]

Love is also a stimulus to genius:—

'Love warms our fancy with enlivening fires,
Refines our genius and our voice inspires.'[3]

Love likewise brings spiritual pleasures, and raises the soul 'from earth to God.'

§ 98. Finally, the joys of marriage are thus portrayed:—

'Then before all they stand—the holy vow,
And ring of gold no fond illusions now,
Bind her as his. Across the threshold led,
And every tear kissed off as soon as shed,
His house she enters—there to be a light,
Shining within when all without is night;

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[1] Spenser, *Hymn in Honour of Love.* [2] Chapman, *All Fools.* [3] Littleton.

A guardian angel o'er his life presiding,
Doubling his pleasures and his cares dividing;
Winning him back when mingling in the throng—
Back from a world we love, alas! too long,
To fireside happiness, to hours of ease,
Blessed with that charm, the certainty to please.
How oft her eyes read his; her gentle mind
To all his wishes, all his thoughts incline;
Still subject—ever on the watch to borrow
Mirth of his mirth and sorrow of his sorrow!
The soul of music slumbers in the shell,
Till waked and kindled by the master's spell,
And feeling hearts—touch them but rightly—pour
A thousand melodies unheard before.'[1]

'Yet in the long years liker must they grow;
The man be more woman, she of man;
He gain in sweetness and in moral height,
Nor lose the wrestling thews that throw the world;
She mental breath nor fail in childward care,
Nor lose the childlike in the larger mind;
Till at the last she set herself to man,
Like perfect music unto noble words;
And so these twain, upon the skirts of time,
Sit side by side, full summ'd in all their powers,
Dispensing harvests, sowing the To-be,
Self reverent each and reverencing each,
Distinct in individualities,
But like each other even as those who love.'[2]

To these may be added the pleasures of paternity and maternity, but they would take us too far into the tertiary pleasures for present purposes.

§ 99. The presentative ills of sexual restraint are described to some extent in Burton's 'Anatomy of Melancholy'; those who abstain from gratification thereupon become 'heavy and dull, timorous, melancholy, and beyond all measure sad;' they 'are continually troubled with heaviness and heartache;' and in support of his assertions the author cites Matthiolus, Oribasius, Arcularius, Rasis, Magninus, Galen, Hieronymus, Mercurialis, Haliababbas, Rodericus a Castro, Felix Plater and others.[3] More amply are the evils now before us treated of in medical works.

§ 100. The pains of impotence and sterility are susceptible of a natural division into those pains which attend when the inability of the genital function is created either by an accident of birth and constitution or by mutilation and disease which affects those functions alone but does not impair the general system, and secondly into those which accompany the decline of life when the reproductive power fails with all the rest of the bodily powers. The pains of the former class are characteristically representative. In the male sex they are chiefly the loss of offspring, and to some extent the pleasures and benefits of the society of the female sex, though in some situations the defect secures more of those pleasures and benefits than fall to the lot of unimpaired individuals from the greater freedom of access to the other sex allowed; there are also pains derived from an absence of manly vigour and energy, often forcing the man to fall behind in many of the competitions of life; there is also the contempt into which a person suffering such misfortune is brought if his situation is known. In the female sex the pain is almost entirely the loss of offspring and the representative consequences of being unable to produce offspring, sometimes resulting in loss of affectionate care, protection, and society, and causing estrangements of a serious nature. This kind of imperfection, however, is not necessarily destructive of all the pleasures of union of the sexes and married life, for there may be a complete aptitude for copulation on the part of the woman, though she be unable to produce children.

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[1] Samuel Rogers, *Human Life*.

[2] Tennyson, *Princess*.

[3] Part I. Sec. 2, Memb. 2, Subsc. 4.

The woes of sterility will readily be imagined from considerations of the life of Josephine the wife of the first Napoleon, who was forced to give up position, power, and society of the man she loved because of her inability to produce an heir. The sterility of royal personages perhaps best exhibits the injurious consequence of the defect, from the greater importance with which those consequences are vested.

The dishonour with which sterile women are treated by biblical writers is well known.

The other general class of sufferings from impuissance are those which present no special characteristics to distinguish them from the evils of old age and general decay. Perhaps accounts of the infelicities of married life where one of the parties is old and the other young show forth more distinctly those aspects which are especially concerned with the sexual relations. Some of those infelicities are described in Prior's 'Hans Carvel.' Another group of pains of old age as bearing on sexuality is thus indicated:—

> 'An old man's loose desire,
> Is like the glowworm's light the Aparos wondered at,

Which, when they gathered sticks and laid upon 't,
And blew and blew, turned tail and went out presently.'

And in another place, their loves are called—

'Faint smells of dying flowers, carrying no comforts;
They're doting, stinking fogs, so thick and muddy,
Reason, with all his beams, can't beat through them.'[1]

A well known poem of Eliza Cook's exemplifies the mismating of the old and young:—

'I brought thee from a simple home when early friends had met,
And something filled thy farewell tone that whispered of regret.
Oh! could I wonder, when you left warm spirits like your own,
To dwell upon far distant earth with age and wealth alone?

. . . .

But oh! thy young and glowing heart could not respond to mine;
My whitened hairs seemed mocked by those rich sunny curls of thine;
And though thy gentle faith was kind as woman's faith can be,
'Twas as the spring flower clinging round winter's blighted tree

. . . .

I alone have been the selfish and unwise:
Young hearts will nestle with young hearts, young eyes will meet young eyes;
And when I saw his earnest glance turn hopelessly away,
I thanked the hand of Time that gave me warning of decay.'[2]

I will conclude this section with a reference to Tennyson's 'Tithonus.' The sorrows of a worn and wasted old man in the presence of his ever youthful paramour and his recollections and regrets over past happiness form a rare picture of the pain of old age as bearing upon the sexual appetite and pleasures.

Death itself is far preferable to an impotent old age.

§ 101. For illustration of the presentative (and some quite representative) pains attached to sexual gratification and offsetting its pleasures, we must resort chiefly to medical descriptions of venereal diseases.

The enervating effects of sexual joys are typified in the episode of the enslavement of Rinaldo by Armida in 'La Gerusalemme Liberata' of Tasso. The whole of the 16th Book is illustrative of this general subject.

Another class of pains associated with the sexual pleasures comprises those of maternity without the marriage vows. I quote three stanzas of a touching poem by William Motherwell:—

'My heid is like to rend, Willie,
My heart is like to break;
I'm wearin' off my feet, Willie,
I'm dyin' for your sake!

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[1] Beaumont and Fletcher.

[2] *The Dying Old Man to his Young Wife.*

O lay your cheek to mine, Willie,
  Your hand on my briest-bane,—
O say ye'll think on me, Willie,
  When I am dead and gane !

It's vain to comfort me, Willie,
  Sair grief maun ha'e its will ;
But let me rest upon your briest,
  To sab and greet my fill ;
Let me sit on your knee, Willie,
  Let me shed by your hair,
And look into the face, Willie,
  I never sall see mair !

I'm sittin' on your knee, Willie,
  For the last time in my life —
A puir heart-broken thing, Willie,
  A mither, yet nae wife.
Ay, press your hand upon my heart,
  And press it mair and mair,
Or it will burst the silken twine,
  Sae strong is its despair.

Some extracts from a work entitled 'What Women should Know,'[1] will be descriptive of the pains which maternity even when blest by marriage brings, especially in its earlier stages :

'I pity the young wife most sincerely at this period, for it is the most pitiful of her whole existence. She is forced to turn her back on the life she has hitherto led, with all its well-known pleasures and compensations ; while suddenly all the brightness vanishes which had made the future so attractive. She sees before her an entirely new life, about which she knew nothing—about which she hears nothing but lamentations ; on whose threshold she experiences unparalleled wretchedness ; and to fully enter which she knows she must pass through the gateway of pain down to the very portal of death. It is all darkness, and she gropes weariedly without a guide to direct her to the light. . . . From the first, her condition is pitied by women, and her ill-feelings underestimated by men. She has drugs recommended to her to cure the nausea which is one of the earliest symptoms of pregnancy. She is told that she must eat when her stomach loathes food ; not only that she must eat, but that she must eat more than usual of strong hearty food "to keep up her strength," and "to supply nutriment for two." She must not lift ; she must not run ; in fact, must deprive herself of all her usual modes of exercise, for fear of untoward results. She is taught that every pressing whim must be gratified at a cost of whatever inconvenience to others. Presently, it is hinted that it is no longer proper for her to appear in public, so she stays at home a close prisoner, only venturing out at long intervals when necessity compels. From being a prisoner to the house, she is likely to become a prisoner to her room. If she goes up and down a flight of steps once during the day, it will be an event worth mentioning. If circumstances oblige her to engage in household occupations—and there are probably more working wives than idle ones—she goes about them with great difficulty and pain, grasping at support when it is within reach, and suffering torments of which the spectators have no suspicion. Her personal appearance certainly becomes such that one cannot wonder at her hesitation in making a public display of herself.

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[1] By Mrs. E. P. Duffey, Philadelphia.

'*No Way of Escape.*—So the last day comes round, bringing with it a sense of helplessness and dread such as no one who has not experienced it can know anything about. "If there was only any way of escape," is the constant tenour of her thoughts. But the circle of pain closes around her.

'*A very Bad Time.*—She has a "very bad time," and possibly the attendant physician finds it necessary to make use of instruments. She comes back to life from almost the very jaws of death, to remain a close prisoner in her room if not in her bed for weeks. At last she issues forth—because no injunction of either friend or physician can keep her longer there—pale and tottering, suffering weakness that nearly bows to earth, and pains in the back and elsewhere too acute to be borne. Have I painted the picture in too vivid colours for truth? Ask any young wife about her first experience, and see if she doesn't verify my statements.

'*Feelings after a first Confinement.*—The agony of my own first confinement I shall never forget. For years afterwards, I could not hear of a friend or acquaintance as being in a condition liable to pass through a similar experience, without a shudder and a thought that I would rather hear of her impending execution, in which case, the suffering could not possibly be more intense, and would certainly be far briefer.'[1]

Says another author:[2] '—Of all sicknesses, debilities, ailments, illnesses and enfeeblements to which a woman as such is liable, none so prostrates the higher faculties as child-bed diseases. Once they take on the prolonged form, the subject sinks to the lowest level of responsible personality. Her babe in the cradle is scarcely more characterless than she is. Her body is relaxed in every fibre. If moved others have to do it. Her mind is weak to a degree that forbids the exercise of judgment or good sense in matters pertaining to household duties, family cares, nursing and management of her child, or manifestation of love for her husband. She is entirely disassociated from general society and takes no interest in matters of public concern.'

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[1] P. 143 ff.

[2] James P. Jackson, M.D., *American Womanhood*, p. 86.

Let us next notice some of the more representative ills attendant upon the association and cohabitation of the sexes.

'Miserable indeed is the condition of two beings united together in discord. Life thus drags heavily on from day to day, while the parties live together in the constant practice of hypocrisy or in perpetual strife. The heart does not light up the smile that plays upon the lips; the soul does not participate in the feelings that the tongue is compelled to counterfeit. If we continue the deception for any considerable period after the utterance of the false vow at the altar, we live in daily violation of the law of God, while the adder of conscience continues to eat deeply into our peace of mind. The home that should at once form the source and centre of all true enjoyment becomes hateful, and constantly reminds us of our baseness. Or, if we at once throw off the mask, what a shadowy path will appear in the distance! Not content with possessing ourselves, under false pretences, of the fortune of another, we consummate the treacherous work, acknowledge the baseness of the motive, and thus mingle poison in the cup of the betrayed one's happiness. We thus add to the villainy and aggravate the original offence. We thus embitter a life that has ventured its all for us—and destroy an illusion dearer perhaps than life itself. We thus entail a living death upon one whose only error was a too blind confidence, a too easy credulity, or a too susceptible heart.'[1]

The additional burden of expense is a drawback to the pleasures of marriage.

The mastery of a husband is galling to the wife.

So likewise to man the restrictions of marriage are fetters.

The tongue of women is sometimes an offence.

More terrible than these are sometimes the consequences of marriages.

'His lot unfortunate in nuptial choice,
From whence captivity and loss of eyes.'

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[1] *Courtship and Marriage.* Morris, Philadelphia, 1858.

'Whate'er it be, to wisest men and best,
Seeming at first all heav'nly under virgin veil,
Soft, modest, meek, demure,
Once joined, the contrary she proves, a thorn
Intestine, far within defensive arms
A cleaving mischief, in his way to virtue
Adverse and turbulent, or by her charms
Draws him awry, enslav'd
With dotage, and his sense deprav'd
To folly and shameful deeds which ruin ends,
What pilot so expert but needs must wreck
Embarked with such a steersmate at the helm?'[1]

And dreadful is the lot of woman ofttimes:—

'And now among her neighbours to explore,
And see her poorest of the very poor!
I would describe it, but I bore a part,
Nor can explain the feelings of my heart;
Yet memory since has aided me to trace,
The horrid features of that dismal place.
There she reclined unmoved, her bosom bare
To her companion's unimpassioned stare,
And my wild wonder! Seat of virtue! chaste
As lovely once! O how wert thou disgraced!
Upon that breast, by sordid rags defiled,
Lay the wan features of a famished child;
That sin-born babe in utter misery laid,
Too feebly wretched e'en to cry for aid;
The ragged sheeting o'er her person drawn,
Served for the dress that hunger placed in pawn.'[2]

The following short quotations indicate some of the disagreeable attendants upon child-rearing:—

'At first, the infant
Mewling and puking in the nurse's arms.'[3]

'Children blessings seem, but torments are;
When young our folly and when old our fear.'[4]

'Yet a fine family is a fine thing
(Provided they don't come in after dinner);
'Tis beautiful to see a matron bring
Her children up (if nursing them don't thin her).'[5]

No more common and no more fatal blight upon amatory bliss is to be found than jealousy.

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[1] Milton, *Samson Agonistes.*

[2] Crabbe; see also account of Phœbe Dawson by same author, *Tales*, etc.

[3] Shakspeare, *As you Like It.*

[4] Otway, *Don Carlos.*

[5] Byron, *Don Juan.*

'Yet is there one more cursed than they all,
That canker-worm, that monster, jealousy,
Which eats the heart and feeds upon the gall.
Turning all love's delight to misery,
Through fear of losing his felicity.
Ah, Gods! that ever ye that monster placed
In gentle love, that all his joys defaced.'[1]

§ 102. Among the pleasures associated with the pains of sexual denial are those of continence, moderation, and chastity.

'Nothing makes women more esteemed by the opposite sex than chastity; whether it be that we always prize those most who are hardest to come at, or, that nothing besides chastity with its collateral attendants, truth, fidelity, and constancy, gives the man a property in the person he loves, and consequently endears her to him above all things.'[2]

'So dear to Heaven is saintly chastity,
That when a soul is found sincerely so,
A thousand liveried angels lacquey her,
Driving far off each thing of sin and guilt,
And in clear dream and solemn vision
Tell her of things that no gross ear can hear;
Till oft converse with heavenly visitants
Begin to cast and teem on the outward shape
The unpolluted temple of the mind,
And turn it by degrees to the soul's essence,
Till all be made immortal.'[3]

Closely connected with continence and chastity is modesty, with its beauties and utilities; 'Modesty, the flower of manners, the honour of our bodies, the grace of the sexes, the integrity of the blood, the guarantee of our race, the basis of sanctity, the pre-indication of every good disposition.'[4] 'Modesty is not only an ornament but also a guard to virtue. It is a kind of quick and delicate feeling in the soul, which makes her shrink and withdraw herself from everything that has danger in it. It is such an exquisite sensibility as warns her to shun the first appearance of everything that is hurtful.'[5]

We will now illustrate some of the advantages of celibacy and therewith close this section and our remarks concerning sexuality. Apropos of the admirable characteristics of maidenhood a writer says:[6] 'I am inclined to believe that many of the satirical aspersions cast upon old maids tell more to their credit than is generally imagined. . . . I have always found that neatness, modesty, economy, and humanity are the never-failing characteristics of that terrible creature an "old maid."'

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[1] Spenser, *Hymn in Honour of Love.*
[2] Addison.
[3] Milton.
[4] Tertullian, *On Modesty.*
[5] Addison, *Spectator*, No. 231.
[6] See Southgate's Coll., title, *Maids.*

From a religious point of view there is much benefit from unmarried life. Says Paul in his letter to the Corinthians:[1] 'He that is unmarried careth for the things that belong to the Lord; but he that is married careth for the things that are of the world, how he may please his wife. There is a difference also between a wife and a virgin. The unmarried woman careth for the things of the Lord that she may be holy, both in body and spirit; but she that is married careth for the things of the world, how she may please her husband.'

Saith Bacon:[2] 'He that hath a wife and children hath given hostages to fortune; for they are impediments to great enterprises, either of virtue or mischief. Certainly the best works and of greatest merit for the public have proceeded from the unmarried or childless men, which both in affection and means have married and endowed the public. . . . Unmarried men are best friends, best masters, best servants.'

The general advantages of restraint of marriage and procreation in their bearing upon human welfare have been ably set forth by Malthus: 'This prudential restraint, if it were generally adopted, by narrowing the supply of labour in the market, would in the natural course of things soon raise its price. The period of delayed gratification would be passed in saving the earnings which were above the wants of a single man; and in acquiring habits of sobriety, industry, and economy which would enable him in a few years to enter into the matrimonial contract without fear of its consequences. The operation of the preventive check in this way, by constantly keeping the population within the limits of the food, though constantly following its increase, would give a real value to the rise of wages, and the sums saved by labourers before marriage very different from the forced advances in the price of labour or arbitrary periodical durations, which in proportion to their magnitude and extensiveness must of necessity be followed by a proportional advance in the price of provisions. As the wages of labour would thus be sufficient to maintain with decency a large family, and as every married couple would set out with a sum for contingencies, all squalid poverty would be removed from society; or at least, confined to a very few who had fallen into misfortune against which no prudence or foresight could provide.

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[1] I Cor. vii.

[2] Bacon, Essay VIII. *Of Marriage and Single Life.*

. . . These considerations show that the virtue of chastity is not, as some have supposed, a forced product of artificial society; but that it has the most real and solid foundation in nature and reason, being apparently the only virtuous mean of avoiding the vice and misery which result so often from the principle of population.'[1]

SOCIETY.— SOLITUDE.

§ 103. Under the head of pleasures of society is placed the general pleasure derived from the amicable presence of another human being; its opposed pain is characteristically that of loneliness. A child playing near its mother, contentedly and happily, exemplifies the first; the outcry made when, upon the departure of its mother, for a moment only perhaps, it discovers itself alone indicates the second. The child in the latter case is not hurt by anything except the absence of one whom it is accustomed to see and upon whom it is accustomed to depend. It wants nothing save its mother's presence; with her return it becomes quiet and happy once more. Its pain is not a pain from bodily injury, darkness, cold, prostration, suffocation, hunger, thirst, restlessness, constraint, sexual oppression, though it may be connected with these; it is a unique and distinct pain. So the corresponding pleasure is not pleasure from bodily strength and health, not from light and heat, not from respiration, not from exercise, not from repose, not from alimentation, not from sexual union; it is a separate and distinct pleasure in itself.

§ 104. No one, probably, will deny that there is a pleasure of society and a pain in solitude; the objection which will be raised is that they are not primary—not to be ranked as original and appetitive like repletion and hunger. That they are primary seems evident to me from the following considerations.

1. In earliest infancy the presence of some other human being is so indispensable to happiness, and solitude is so unbearable. It is well known that in early infancy a child if left alone will cry, and it is difficult to believe that at so early an age any associations could be formed between the presence of others and the supply of food, warmth, etc., necessary for its comfort.

2. In childhood man is wholly dependent upon others for the preservation of his life and for the promotion of his growth. If left entirely alone he would die. This fact makes it inevitable that an

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[1] *On Population* Bk. IV. Chap. II.

appetitive pleasure should arise and be transmitted without interruption, which connects the happiness of man's life with the presence of other beings like himself.

3. This dependence of one human being upon another is continued into manhood and throughout life in the associations of men in communities, and in the reciprocities of advantage which society brings. Man is naturally gregarious; and this union in communities following close upon the dependence of child upon parent is corroborative of the doctrine of a natural appetite for society.

4. The reproduction of the race demands that there should be a primitive and original pleasure in the presence of others. If there were not first a pleasure in society, the pleasure of sexual gratification would not be experienced. Individuals of different sexes could not be brought together at all; they would not endure each other's presence; when, however, there is first a pleasure in the society of another and the sexes are brought together in social intercourse, the sexual appetite is awakened and the method of gratifying it learned.

5. It is thus seen that growth, preservation, and reproduction all require society; but we found that these three functions embrace all primary pleasures. Since, then, these primary functions demand for their fulfilment the presence of other human beings, that presence becomes a primary and fundamental object of desire, that is, a primary pleasure.

6. None of the other primary pleasures in their most simple and presentative enjoyments have need of the pleasure of society except sexual gratification. All the others can be enjoyed as presentative pleasures, without the presence of other persons. There is hence among them no germ for the social pleasures which are admitted to exist. And the sexual pleasure cannot be said to be the foundation of the social pleasure, for the reason above given, namely that it would not be known unless there was first a pleasure of society, and for the further reason that the social pleasure arises and exists long before the sexual desire. The appetite of sexuality is wanting in a portion of human life, during which portion the social desire has been receiving its gratification. Further, there is pleasure in the society of persons of the same sex, which can hardly be explained on the hypothesis that the sexual appetite is the basis of sociality.

7. Unless there is a primitive pleasure of society, there is no adequate explanation of disinterested feelings and benevolent

regards. In the first place, if there were not an original pleasure of society, men would flee from each other and separate as widely as possible, so that there would be no opportunity for the exercise of benevolent regards. In the second place, the exercise of disinterested feelings tends to draw human beings together, and if there were not a primitive satisfaction in being together, such feelings would be against nature as encouraging that which is repugnant to nature. Instead of benevolent feelings there would be malevolent and repellent feelings. But, admitting a primitive pleasure of society, the benevolent and disinterested pleasures follow as a matter of course, since their tendency is to encourage and perpetuate social relations. In order to have the presence of another, that other must be happy in your presence, and in order to make him happy, you must so conduct yourself as to foster his happiness, not lessen it; and in order to foster his happiness, you must be willing that he should be happy, must desire him to be happy; this is the foundation of benevolence.

§ 105. The pleasures of society are of great variety, because of the continual and varied intercourse with one's fellows in all the relations of life. They are intimately connected with all the other primary pleasures. Their association with the preservation and maintenance of life has been referred to; they are hence connected with pleasures of integrity, vitality, heat, movement, repose, repletion, and less directly with respiration. The association appears most prominently with sexuality, exercise, and repletion; human brotherhood is appreciated most, as it contributes to the supply of food, as it affords scope for multifarious occupations, and as it gives opportunity for the union of the sexes for reproductive purposes. Society and sexuality are the two great factors in family affection, though it would seem in some of its phases that the latter is almost entitled to a distinct place among the primary pleasures. But parental love is so immediately consequent upon, and so indissolubly joined to the sexual pleasures that they can hardly be separated, while its correlative, filial affection, is evidently susceptible of inclusion with the pleasures of society, since it subsists in the same degree toward a person not actually a parent, but occupying the place of one, attending to the wants and remaining near the child. Until the child has learned to know what parentage means, if its mother be away and its nurse be constantly present, the latter receives the child's affection.

So also adopted children grow up to have the same love for foster parents, as if they were actually the father and mother.

§ 106. The pains of solitude have intimate connection with the pains of sexual denial; they also are attached to the other primary pains in a manner corresponding to the association of the pleasures of society with the other primary pleasures. In the ratio in which society contributes to growth and preservation, absence of society is adverse to them and tends toward disintegration.

§ 107. Society has its pains as well as its pleasures. We do not take the pleasure of society in the presence of another human being unless that presence be an amicable one. In opposition to social enjoyment, there come in at this point the pleasures springing from the predatory disposition, pleasures in other words which centre about alimentation. These aim at the destruction of other human beings, the social pleasures aim at their preservation. The presence of another human being, therefore, may awaken pleasure of society or representative pleasure of alimentation, feelings of benevolent regard, or feelings of aggressive hostility. These two sets of feelings are ever coming into conflict with each other, and it is only in their harmonious adjustment that the social state can be maintained, and at the same time development and advancement of the individual secured. From the one class spring the egoistic pleasures: from the other the altruistic; the two grow together and check each other. Hence amid the enjoyments of society there exist pains, coming from opportunities given by social intercourse to advance personal interest at the expense of the interest of one's neighbours. Jealousies, frauds, acrimonious competitions and rivalries, slander, disparaging comment, backbitings, oppressions, and indeed, the whole catalogue of evils and vices growing out of the social state, are here to be thought of. In addition, may be mentioned the hindrances which society throws in the way of meditative and contemplative pursuits, close application and the comforts of retirement; a hermit's life has its joys. All such deprivations are to be counted among the pains attached to society.

§ 108. On the other hand, solitude has its pleasures. They are chiefly of the character just spoken of, namely, those enjoyments which pertain to a life of study and meditation. They are to a considerable extent pleasures of repose also.

§ 109. It is difficult to characterise the pleasures and pains now under consideration, as more of the pervasive than the intense type; they may be both or either, though perhaps in their most presentative aspects they should be regarded as pervasive. The original pleasure of society, and the original pain of solitude affect mainly the senses of hearing, sight, and touch. I am disposed to believe that there is, besides, a primitive sensibility to the presence of another human being indicating oftentimes the character and purposes of that being, whether amicable or hostile, which has not been brought out by physiological and psychological researches. There seems to be a subtle communication between minds which is not yet fully explained, and does not seem quite explicable from the basic sensibilities now allowed to be possessed by man. Though not undertaking to declare any positive conviction upon a subject which I have not the opportunities to investigate, I yet hazard the conjecture that there will be discovered a sense of the character I have indicated, having its seat in properties of matter which are now recondite, and having a corresponding development in the phenomena of mind. If there be such a sensibility, when its character is made evident, and its nature fully investigated, there may be thrown much light upon those mesmeric mind-reading and so-called spiritual phenomena which have excited the superstition of the ignorant and have perplexed the scientific.

§ 110. We will begin our illustrations with extracts dwelling upon the social pleasures in general. I will quote a section from Burke's Essay 'on the Sublime and Beautiful' which sets forth the general relations of society and solitude: 'I observe that society merely as society gives us no positive pleasure[1] in the enjoyment; but absolute and entire solitude, that is, the total and perpetual exclusion from all society, is as great a positive pain as can almost be conceived. Therefore, in the balance between the pleasure of general society and the pain of absolute solitude pain is the predominant idea. But the pleasure of any particular social enjoyment outweighs very considerably the uneasiness caused by the want of that particular enjoyment; so that the strongest sensations relative to the habitudes of particular society are sensations of pleasure. Good company, lively conversation, and the endearments of friendship fill the mind with great pleasure; a temporary solitude, on the other hand, is itself agreeable. This may perhaps prove that we are creatures designed for contemplation as well as action, since solitude as well as society has its pleasures as, from the former observation, we may discern that an entire life of solitude contradicts the purposes of our being, since death itself is scarcely an idea of more terror.'

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[1] Sec. 11, Part I. The author probably means *intense* pleasure.

In the first chapter of Part Second of Zimmerman on 'Solitude,' occurs a series of alternate laudations of society and solitude. Omitting the latter, we will observe some of the former:—

'It must be confessed that it is not good for man to be alone; that a total solitude is foreign to his nature and unfriendly to his happiness. Not only a multitude of wants which cannot be supplied without the assistance of his brethren, but an innate bias and constitutional propensity to communism draw him from the recesses of solitude and join him in the bonds of society. Of his necessities association is indeed the most imperious and irresistible.

'The Deity who framed and ordered our being, has sanctioned and commanded this impulse to social commerce, by impressing it on our nature and rendering the desire of a companion the continual cry of our hearts. . . . The inclination to domestic intimacy and confidential union is inherent in the constitution of our minds; in seeking them, we obey the counsels of reason and the injunctions of nature. . . . . Affectionate intercourse is an inexhaustible fund of delight and happiness. In the expression of our feelings, in the communication of our opinions, in the reciprocal interchange of ideas and sentiments, there lies a treasure of enjoyment, for which the solitary hermit, and even the surly misanthrope continually sighs. . . . Benevolence, affection, inclination towards love and sympathy, joined with the impulse to domestic intimacy which they tend to produce, develop the powers, and awaken the virtues of man. Without these enlivening emotions he would slumber in brute indifference and grossness, careless of his talents to please and negligent of his powers to improve; stimulated by them he cultivates and multiplies his energies; and while rendering himself instrumental to the happiness of others, secures resources for his own. . . . . Company is frequently sought by the unhappy as a shelter from the invasion of sorrow; as a relief from the pangs of established grief; or as a respite from the forebodings of approaching affliction.'

'Man, like the generous vine, supported lives;
The strength he gains is from th' embrace he gives.'

'Heaven, forming each on other to depend,
A master, or a servant, or a friend,
Bids each on other for assistance call,

> Till one man's weakness grows the strength of all.
> Wants, frailties, passions, closer still ally
> The common interest or endear the tie.
> To these we owe true friendship, love sincere,
> Each homefelt joy that life inherits here.'

I find this anonymous passage:—

'Society has been aptly compared to a heap of embers, which when separated, soon languish, darken, and expire; but if placed together, glow with a ruddy intense heat, a just emblem of the strength, the happiness, and the security derived from the union of mankind.'

I quote also from Waitz's 'Anthropology':—

'Among the social peculiarities there is also to be mentioned a specific feature, the attachment to his (man's) country, family and people, owing partly to the personal relations of individuals. This attachment does not exist in animals, deficient as they are in individualisation; an animal can easily be separated from one flock and attached to another; whilst for man, however uncivilised he may be, such a separation from a locality—where by language, personal intercourse, and a thousand habits, his being has taken root—is always painful, making him feel that for his happiness he requires not merely human society in general, but some definite individuals by whom he is understood.' The same author makes concomitant with the social relations the pleasures of property, of public applause, and of the gradations of rank and power.

This is ascribed to Sir Walter Scott and illustrates the general subject: 'The race of mankind would perish did they cease to aid each other. From the time that the mother binds the child's head till the moment that some kind assistant wipes the damp from the brow of the dying, we cannot exist without mutual aid.'

§ 111. The variety of the pleasures of society is inexhaustible: their combinations, recombinations, and associations as multifold as the sands of the sea. We can only instance a very few of the more prominent groups. Proceeding therefore in such a course, we may notice an anonymous paragraph which indicates the pleasures of society as modified by sexuality:—'The society that exists between men is a mere commerce of thought. They seem to meet and associate for no other purpose than that of communicating to each other their ideas of men and things; but the society that exists between man and woman is a commerce not of thought but of feeling. . . . The society which exists between man and woman is a commerce of the intellectual and sensitive parts of our nature; it is the commerce of the head with the heart, of reason with sensibility; but as reason serves only to moderate and chill, and sometimes extinguish, all the sources of our pleasure, while sensibility is always seeking to promote them, it is very obvious that the society that exists between male and female must be a greater source of happiness than that which exists between man and man. Hence it is that without female society man cannot attain the highest degree of human felicity, however independent he may be, or however his mind may be formed by nature for happiness and enjoyment.'[1]

The following verses point to the pleasures of domestic society:

'How sweet to turn at evening's close from all our cares away,
And end in calm, serene repose the swiftly passing day!
The pleasant books, the smiling looks of sister or of bride,
All fairy ground, doth make around one's own fireside!'[2]

Says Cicero, 'Friendship improves happiness and abates misery by the doubling up of our joy and the dividing of our grief.' This term suggests one very important variety of the pleasures of society: 'Friendship is one of the greatest boons God can bestow on man. It is a union of our finest feelings; an uninterested binding of hearts, and a sympathy between two souls. It is an indefinite trust we repose in one another, a constant communication between two minds, and an unremitting anxiety for each other's souls.' . . . 'Where friendship exists between two persons, there is always hope; in adversity there is always a support, a refuge, a knowledge of there still remaining some succour; and as a babe cries for its mother for nourishment, so do we in adversity run to friendship for advice, fully relying on some means by which it may release us from the troubles of the world.'[3]

One of the best accounts of the joys of friendship to which I am able to refer the reader, is found in the 'Laelius' of Cicero. In that tract most of the advantages before alluded to are touched upon. I will make only one quotation, expressing an opinion as to the original character of the social pleasures. This passage is especially significant in its relation to the view taken in these pages that society is a natural appetitive pleasure. 'I am persuaded therefore that it derives its origin not from the indigence of human nature, but from a distinct principle implanted in the breast of man: from a certain instinctive tendency which draws congenial minds into union: and not from a cool calculation of the advantages with which it is pregnant.'[1]

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[1] Southgate's Coll., *Female Society—Charms of.*

[2] D. F. McCarthy.

[3] J. Hill.

§ 112. Another class of pleasures of society is typified in the term Conversation. Said Franklin; 'Conversation warms the mind, enlivens the imagination.'[2] Remarks Addison,[3] 'Conversation with men of polite genius is another method for improving our natural taste.' 'Social discussion supplies the natural integration for the deficiencies of private and sequestered study. Simply to rehearse, simply to express in words amongst familiar friends, one's own intellectual perplexities is oftentimes to clear them up. It is well known that the best means of learning is by teaching; the effort that is made for others is made eventually for ourselves; and the readiest method of illuminating obscure conceptions or maturing such as are crude, lies in an earnest effort to make them apprehensible by others. . . . . In speaking above of conversation we have fixed our view on those uses of conversation which are ministerial to intellectual culture; but in relation to the majority of men, conversation is far less valuable as an organ of intellectual culture than of social enjoyment. For one man interested in conversation as a means of advancing his studies there are fifty men whose interest in conversation points exclusively to convivial pleasures. This, as being a more extensive function of conversation, is so far the more dignified function; whilst on the other hand such a purpose as direct mental improvement seems by its superior gravity to challenge the higher rank. Yet in fact even here the more general purpose of conversation takes precedency, for when dedicated to the objects of festal delight, conversation rises by its tendency to the rank of a fine art.'[4]

In this connection are to be noted the pleasures of eloquence. 'In whom does it not enkindle passion? Its matchless excellence is applicable everywhere, in all classes of life. The rich and the poor experience the effects of its magic influence. It excites the soldier to the charge and animates him to the conflict. The miser it teaches to weep over his error, and to despise the degrading betrayer of his peace. It convicts the infidel of his depravity, dispels the cloud that obscures his mind, and leaves it pure and elevated. The guilty are living monuments of its exertion, and the innocent hail it as the vindicator of their violated rights and the preserver of their sacred reputation. How often in the course

[1] VIII. Melmoth Trans.

[2] *Letters to Lord Kames; Spark's Biography.*

[3] *Spectator*, No. 409.

[4] De Quincy. *Conversation.*

of justice does the criminal behold his arms unshackled, his character freed from suspicion, and his future left open before him with all its hopes of honours, station, and dignity! And how often in the halls of legislation does eloquence unmask corruption, expose intrigue, and overthrow tyranny! In the cause of mercy it is omnipotent. It is bold in the consciousness of its superiority, fearless and unyielding in the purity of its motives. All opposition it destroys; all power it defies.'[1]

Some of the representative pleasures of society are exemplified in the advantages of associations and conventions. Says Dr. Francis Lieber: 'The associative principle is an element of progress, protection, and efficient activity. The freer a nation, the more developed we find it in larger and smaller spheres; and the more despotic a government is, the more actively it suppresses all association.'[2]

The reader who is sufficiently interested to turn back the pages of this chapter will find under every subdivision illustrations of the pleasures of society associated with others.

§ 113. What illustrations I shall make of the pains of solitude in general, will be taken largely from the 'Genius of Solitude' by W. R. Alger, who treats at length and very fully of both the delights and griefs of solitude, and who enforces his remarks by numerous historical references and by many quotations, some of which we shall do well to use.

> 'Alone! that worn-out word,
> So idly spoken and so coldly heard;
> Yet all that poets sing, and grief hath known,
> Of hope laid waste knells in that word, Alone!'[3]

'Solitude has imbecility for one of its handmaids. It was found, when the separate and silent system was introduced into the Pennsylvania prison, almost impossible to prevent the convicts from climbing up the windows to salute each other, and from conversing through the walls of adjacent cells by signals—so fierce was the demand of nature for sympathetic communication.'[4] 'Solitude is the breeding-place of fear. Nowhere else does superstition thrive so well. Bentham observed, 'Many a one who laughs at hobgoblins in company, dreads them when alone.'[5] Goethe has said: 'Were there but one man in the world he would be a terror to himself.' Nay, it may be added, 'Were there but one man in the world, there would be no man in the world.'[6] 'Zimmerman and

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[1] Melvill.
[2] *On Civil Liberty and Self-Government*, Chap. XII.
[3] P. 43. Boston.
[4] P. 92.
[5] P. 95.
[6] P. 99.

Byron, two irascible and lonely spirits, most fond of retirement, noticed the danger of a chill shrivelling of sympathy in too isolated life. The former says, 'Solitude must render the heart callous.' The latter says:—

> 'In solitude
> Small power the nipped affections have to grow.'[1]

'To dwell alone is an evil when we use our solitude to cherish an odious idea of our race, and a disgust for the natural attractions of life.'[2] 'Few reach middle age without receiving wounds which never heal. We hide these wounds when we can, or we forget them in business, perhaps in dissipation; but they remain with us still, and in moments of solitude and depression open to pain us.' It is one of the subtlest and most destructive habits in which those fond of loneliness are tempted to indulge, to reopen their old wounds in secret and feel again their bitter-sweet pains.'[3]

§ 114. The pains associated with society are as varied as the pleasures. I will first refer to that large class indicated by the term *bad society*; 'Good or bad company,' said L'Estrange, 'is the greatest blessing or greatest plague of life.'

> 'Nothing worse,
> In whatever cause, than impious fellowship;
> Nothing of good is reap'd; for when the field
> Is sown with wrong, the ripen'd fruit is death.
> If with a desperate band, whose hearts are hot
> With villainy, the pious hoists his sails,
> The vengeance of the gods bursts on the bark,
> And sinks him with the heaven-detested crew.
> If 'midst a race, inhospitably bent
> On savage deeds, regardless of the gods,
> The just man fix his seat, th' impending wrath
> Spares not, but strikes him with vindictive fury,
> Crush'd in the general ruin.'[4]

'There is a certain magic or charm in company, for it will assimilate and make you like to them by much conversation with them; if they be good company, it is a great means to make you good, or confirm you in goodness; but if they be bad, it is twenty to one but they will infect and corrupt you.'[5] 'A bad man is a curse to others; as he is secretly, notwithstanding all his boasting and affected gaiety, a burden to himself. Shun him as you would a serpent in your path.'[6] 'Bad company is like a nail driven into a post, which after the first or second blow may be drawn out with little difficulty; but being once driven up to the head, the pincers cannot take hold to draw it out, but which can only be done by the destruction of the wood.[1]

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[1] P. 125. [2] P. 126. [3] P. 129 [4] Aeschylus, *Sept. c. Theb*, 597.
[5] Sir M. Hale. [6] Bishop W. H. Coleridge.

The evils of society to the student are thus referred to by Cowley:—'If we engage into a large acquaintance and various familiarities we open our gates to the invaders of most of our time; we expose our life to a quotidian ague of frigid impertinences which would make a wise man to tremble to think of.'

Walpole thus characterises the ennui of society: 'Oh, my dear sir, don't you find that nine parts in ten of the world are of no use but to make you wish yourself with that tenth part? I am so far from growing used to mankind by living amongst them, that my natural ferocity and wildness do but every day grow worse? They tire me, they fatigue me; I don't know what to do with them; I fling open the windows and fancy I want air; and when I get by myself I undress myself and seem to have had people in my pockets, in my plaits, and on my shoulders; I indeed find this fatigue worse in the country than in town, because one can avoid it there and has more resources: but it is there too, I fear 'tis growing old, but I literally seem to have murdered a man whose name was ennui; for his ghost is ever before me. They say there is no English word for ennui.'

Corresponding to pleasures of friendship are the pains of competition and enmity. We have already had various illustrations of the evils of enmity. Under the head of Integrity-Disintegration, some of the more presentative pains of war were set forth. Under the head of Alimentation the pains of a predatory life were exhibited. The latter exemplified especially the pains resulting in the pursuit of one's ends or in aggression. In the present place it is proper to consider these pains as falling upon one from the impact and aggression of others. They are not associated with the pains likely to visit the pursuer, but rather the ills which are the lot of the pursued.

The succeeding extracts exhibit the pains of slander, evil speaking and ill-use of the tongue; they may be opposed to the pleasures of conversation:—

'Tis slander;
Whose edge is sharper than the sword; whose tongue
Out-venoms all the worms of Nile; whose breath

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[1] St. Augustine.

Rides on the posting winds and doth belie
All comers of the world; kings, queens, and states,
Maids, matrons,—nay, the secrets of the grave
This viperous slander enters.'[1]

'A foul and loathly creature sure in sight,
And in condition to be loathed no less,
For she was stuffed with rancour and despight
Up to the throat, that oft with bitterness
It forth would break and gush in great excess,
Pouring out streams of poison and of gall
'Gainst all that truth or virtue do profess,
And wickedly backbite; her name men slander call.'[2]

Opposed to the pleasures of convention and association may be given the evils of faction and party spirit: 'I have already intimated to you the danger of parties in the state with particular reference to the founding of them on geographical discriminations. Let me now take a more comprehensive view, and warn you in the most solemn manner against the baneful effects of the spirit of party generally.

This spirit unfortunately is inseparable from our nature, having its roots in the strongest passions of the human mind. It exists under different shapes in all governments more or less stifled, controlled, or repressed; but in those of the popular form it is seen in its greatest rankness, and is truly their worst enemy.

The alternate domination of one faction over another, sharpened by the spirit of revenge, natural to party discussion, which in different ages and countries has perpetrated the most horrid enormities is itself a frightful despotism. But this leads at length to a more formal and permanent despotism. The disorders and miseries which result, gradually incline the minds of men to seek security and repose in the absolute power of an individual; and sooner or later the chief of some prevailing faction, more able or more fortunate than his competitors, turns this disposition to the purposes of his own elevation on the ruins of Public Liberty.'[3]

The last of the associated evils of society to which I shall refer are those indicated by the name *Fashion*. 'It is of course very sad to think how often good taste is perverted or ignored in the fabric and form of personal drapery, and how frequently common sense and common honesty are offended by the social customs which fashion ordain. . . . but it goes deeper than this, and becomes a power of no mean magnitude in the world's life—even disputing supremacy with Christianity in our civilisation. . . . If I go to the great cities or even to the little cities, and witness the idleness, the intrigues, the frivolities, and the general self-seeking which characterise the fashionable social life that exists there; or if I look in upon the wanton wastefulness and the worse than childish greed for display at a fashionable summer resort, I can find nothing that will remind me that man has either a nature or a destiny better than a beast—nothing that indicates to me that man as man has common need of ministry and common privilege. . . . The most intimate sympathy to be found in purely fasionable society is that which comes through its low tone of morality. . . . Fashionable society has always been the ally and support of every instituted and profitable wrong. . . . It ignores Christianity, moral worth, intellectual culture, personal loveliness—everything most prized in the soul's life, and loves, and friendships—and decides upon the positions of men and women by its own rule. It shuts out from the circle of its sympathies and support a good man because he is poor; it bids a bad man welcome because he is rich. It ignores the charms of a beautiful and gifted woman because she earns her bread; it accepts an old and ugly remnant of an old and ugly family because she manages to live upon her friends. It kicks the young man of modest worth and noble aims and industries, and kisses the idle lout whose worth is on his back and whose graces are in his heels.'[1]

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[1] Shakspeare, *Cymbeline*.
[2] Spenser, *Faerie Queene*.
[3] Washington, *Farewell Address*.

§ 115. The delights of solitude are often dwelt upon both by poets and by prose writers; but they are chiefly enjoyments only of a comparative solitude. Zimmerman says that a 'total solitude' is foreign to man's nature and unfriendly to his happiness.[2] In this view we find there are many joys connected with solitude, a study of which will reveal the fact that the principal part of the happiness of solitude is found in the pleasure of repose, of uninterrupted mental activity, and in the represented pleasures of society. It is a very curious circumstance that what enjoyment there is in solitude should depend so largely upon its opposite, society. Books may be referred to especially in this connection. Reading is in large measure a substitute for society, that is, it really furnishes a kind of society, representing and renewing social pleasures which have been experienced. And even expressions indicating the joys of solitude, such as, for instance 'communion with nature,' themselves imply society as at the root of the pleasure. All of which goes to show that there is characteristically an innate pleasure of society, and an innate pain of solitude or loneliness.

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[1] J. G. Holland, *Fashion.*

[2] Part II. Chap. I.

The following are from W. R. Alger's 'The Genius of Solitude':—

'For loneliness not only affords incomparable opportunities for preparation, not only yields strength and rest, not only ministers to virtue; it also furnishes rare and costly joys in unequalled compensation for the pangs felt in it. Seclusion and peace are the guardians of innocent dreams, the nourishers of poetic feelings and holy faith.'[1]

'Solitude is the foster mother of sublime resolves. It is the earth of Antaeus, every fresh touch of which emits a thrill of fortifying renewal.'[2] 'The selectest privilege of solitude, its most delicious charm is liberty. Schopenhauer says, "Who does not love solitude loves not freedom; for constraint is the inseparable consort of society." . . . The spirit of moral liberty dwells in solitude.'[3]

'One of the uses of solitude is preparation for death.'[4]

Finally, we will close the illustration of this whole class of pleasures and pains with a quotation from Byron's Childe Harolde, which goes to show that the pain of solitude may be felt in the most crowded thoroughfares and be absent when men seem most alone.

'To sit on rocks, to muse o'er flood and fell,
To slowly trace the forest's shady scene,
Where things that own not man's dominion dwell,
And mortal foot hath ne'er or rarely been;
To climb the trackless mountain all unseen;
With the wild flock that never heeds a fold;
Alone o'er steeps and foaming falls to lean;
This is not solitude; 'tis but to hold
Converse with nature's charms, and see her stores unrolled.
But 'midst the crowd, the hum, the shock of men,
To hear, to see, to feel, and to possess,
And roam along, the world's tir'd denizen,
With none to bless us, none whom we can bless;
Minions of splendour, shrinking from distress!
None that with kindred consciousness endued,
If we were not, would seem to smile the less
Of all that flatter'd, follow'd, sought, and sued;
This is to be alone; this, this is solitude!'

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[1] P. 160. [2] P. 149. [3] P. 168. [4] P. 171.

CHAPTER LXI.

SECONDARY PLEASURES AND PAINS.

§ 1. In treating of Primary Pleasures and Pains, if the catalogue is as complete as I suppose it to be, we have exhausted the basic pleasures and pains of our nature. We now pass to a division where an exhaustive catalogue cannot be made, but in which an enumeration of some principal groups must suffice. For, according to the explanation heretofore given of what is included under the head which forms the title of this chapter, there are innumerable groups of pleasures and pains which are comprised thereunder. The secondary pleasures and pains are those associated with objects (external things, actions, or states) which are regarded as directly ministering to the fundamental enjoyments; they are closely and intimately related to the former, and their importance is readily seen to be derived from that relation. For example, the pleasure of repose is a primary pleasure; the pleasure of the couch is a secondary pleasure, its origin being the association of the idea of repose with that of a couch, and the secondary pleasure being readily resolvable into the primary, and deriving its meaning from the primary. It is one step forward in the process of redintegration. So also the enjoyment of eating is primary; the pleasures of the table are secondary; the delight of exercise is primary; the pleasures of the chariot secondary. Thus a subclass may be made wherever there is an object around which associations gather; they may be more or less general, according to circumstances; there may be a secondary pleasure of the table, and one of the fruit on it or of the wine which cheers the feast. Hence appears the impracticability of making a complete list of the pleasures and pains of this division.

§ 2. If it be asked whether the secondary pleasures and pains are anything but representative primary pleasures and pains, the answer should be in the negative. It then may be further inquired whether there is any difference between an ideal primary pleasure and a secondary pleasure; whether the pleasure of the couch is not an ideal pleasure of repose, for instance. It may be so considered, but though secondary pleasures may be regarded as representative primary pleasures, not every ideal primary pleasure is a secondary pleasure. I may recall a delightful evening spent upon a sofa before a blazing fire, with my book and pipe, or I may imagine one; in this representative experience I have an ideal pleasure which is still primary so long as the repose is the central object of thought and the nucleus of it; but if I connect the experience with the sofa especially, and make that the centre of the associations, in thinking of the pleasures of the sofa I form a representative cluster of pleasures around that object which are secondary. I speak of the pleasures of the sofa considering the sofa as an object through which and by which I obtain the pleasure of rest. I may have an ideal pleasure from the representation of a gathering of people, yet so long as the chief idea in this representation is the enjoyment of social intercourse, I am entitled only to regard it as the representative primary pleasure of society; but now, when I think of it as the pleasure of the club, I attach the pleasures to an object not the ultimate centre of the pleasure, and in so doing I make a secondary pleasure. When, therefore, we have a pleasure which we characterise by a name which does not carry the mind directly back to the ultimate appetitive cravings of human nature, it belongs to the present class (or possibly the next). A similar line of remark may be made of pains.

§ 3. Whenever, then, a pleasure or pain is designated by the name of a definite concrete object, it is a secondary; we have this infallible criterion. Ambiguities arise wherein the same name is used to designate a feeling and an external agent. Take, for example, heat; when the mind refers to the experience the pleasure described is primary; when it refers to the material object as the agent, the pleasure indicated is secondary—heat may mean either the sensation or the agent causing the sensation. But, with this exception, there can no confusion arise from the names used in our table of primary pleasures and pains, and by reason of the broad terms we employ here to describe a large section of the secondary pleasures and pains. This section, however, does not embrace all that are secondary. There are some abstract names used to designate pleasures and pains which names do not have direct application to the primary, but yet indicate actions or states whose reference is very directly to the primary pleasures and pains. We speak of the pleasures of occupation and the pains of idleness, and the mind is at once carried back to movement and exercise on the one hand and inaction on the other. *Occupation* is a broader term than exercise, and yet occupation is to secure the pleasures of exercise and its associates; *idleness* contributes to bring the corresponding pains. *Rowing* is another more specific term of like character; this name denotes action which is to obtain the pleasures of exercise. If, then, we speak of the pleasures of rowing, we describe secondary pleasures. Wherever we make use of a term which has regard not to the feeling but to the action which produces the feeling, and avail ourselves of it to describe a group of pleasures or pains, they come within the division which forms the subject of this chapter. Here great confusion may arise unless care be taken. Pleasures of respiration may be esteemed secondary if the reference is not to the sensation but to the action causing it. So also pleasures of vision, pleasures of movement themselves, pleasures and pains of alimentation and others of the primary pains. But the difficulty may be avoided if we continually bear in mind that a designation referring to the pleasurable or painful sensation itself (or a representative of it, wherein the idea of the sensation is still the prominent one) describes a primary pleasure or pain; while a designation referring chiefly to an action which results in a pleasurable or painful sensation describes a secondary pleasure or pain. Pleasures of walking, riding, sitting, standing, lifting, swallowing, reclining, talking, and the like are, in this view, secondary pleasures, because the names refer not so much to the feeling itself as to the action which produces the feeling.

In a third section of secondary pleasures and pains may be included those indicated by some abstract names whose notions embrace a more general range of objects, combining often representations of two or three or more of the primary pleasures and pains; and yet not sufficiently complex to place them in the tertiary division. These names describe actions or states which are evidently closely related to the primary feelings, and which, like all the other names of secondary pleasures and pains, derive their force and meaning from the primary. Such actions and states are indicated by the terms *occupation—idleness*, before used; *security—insecurity*; *freedom of movement, restraint and captivity*, and the like.

From these examples and illustrations there will be manifest the distinction here made between primary pleasures and pains—the original fundamental appetitive cravings of human nature and their opposites and secondary pleasures and pains—the more direct ministers to those pleasures and pains, described either by the name of some external object, or of some action or some state of representative feeling tending to secure some of the primary pleasures and pains.

§ 4. Since, then, the secondary pleasures and pains are differentiations from the primary, are so closely related to them, and indeed may be resolved into them, it must be observed that in illustrating the primary pleasures and pains we are forced to make use of the secondary. All the variety there is in pleasure and pain, except so far as there is fundamental difference in sensation, springs from variety of the objects with which the feelings are associated. And the feeling is always associated with some object. We have accordingly brought out in the preceding chapter a large number of groups of pleasures and pains which are to be marked as secondary. In illustrating the pleasures of movement we developed the delights of the tourney, of games, of walking, of dancing, and of travelling; each one of them making a group by itself would be a secondary group. Accordingly we shall have less need in this chapter of lengthy illustration of secondary pleasures and pains. Moreover, whatever illustration we do give, will also be illustration of primary pleasures and pains, since the secondary are always resolvable into the primary.

§ 5. An objection may here be raised that while professedly this classification is upon the theory that secondary pleasures and pains are more representative than primary, in fact the primary may be more complex than the secondary, the secondary really going to make up the primary. The pleasures of walking, riding, leaping, running, dancing, etc., constitute the pleasures of movement and exercise, the latter being the former aggregated and generalised. It is true that the terms, *integrity*, *respiration*, *movement*, *repose* and the rest do express notions which are the results of generalisations. But they point (or are intended to point) to the feelings represented and generalised: whereas the terms expressive of the secondary pleasures and pains mean the feeling as subjective *plus* the object causing the feeling, that is the associated object. The fact that some of the names of primary pleasures express secondary has already been adverted to, and the means of remedying any confusion likely to arise have been pointed out (§ 3). The primary class contains pleasures and pains with regard to their subjective side, the secondary with regard to their objective associations; in the latter the subjective primary feeling is always present, but the associations and varieties of objective connection are superadded.

§ 6. It may be well to notice in this place that the line of demarcation between secondary and tertiary pleasures is not a distinct one. Those aggregates of association which seem to be most closely connected with the primary feelings, and which are relatively less representative, should be included among the secondary; the more complex aggregates among the tertiary. In some respect the relations of the grand divisions of pleasures and pains may be shown by a comparison to a number of trees standing near together and with their branches and leaves all interlaced. In each trunk we may find a primary pleasure (or pain) spreading out into a thousand offshoots, and proceeding in a thousand different directions. If now we gather together small groups of contiguous leaves and branches of the different trunks as they lie interlaced, we shall have secondary divisions; then taking still larger collections in the same way we have tertiary divisions. The fault of the simile lies in great part in the fact, that the primary pleasures and pains are not separate and distinct like the trunks of trees, but are themselves interfused and interconnected.

§ 7. The following table will give the three subordinate classes of secondary pleasures and pains with some examples of each.

Section First.—Pleasures and pains of material objects around which are clustered in association the primary pleasures and pains, in varying relations.

Examples.—Pleasures and pains of clothing, defensive armour, weapons of offence, instruments of torture, lamps, the sun, stoves, furnaces, fires, the eye, fog, ice, air, breezes, poisonous vapours, enclosed places, dungeons, tonic medicines, cheering spectacles, poisons, funeral gatherings, carriages, railway cars, quoits, balls, tools, fetters, stocks, sofas, beds, easy-chairs, hashheesh, opium, wine, bread, meat, fruits, carrion, nettles, mosquitoes, beautiful limbs, musical instruments, perfumes, books, villages, public works, deserts, prairies.

Section Second.—Pleasures and pains of actions, or states which are directly conducive to securing primary pleasures and pains.

Examples.—Pleasures and pains of defence, self-mortification, sunrise, eclipse, sunset, balloon-excursion, inflation of the lungs; holding the breath, temperance, intemperance, swimming, riding, thinking, straining, enervating habits, over-exertion, rheumatism, reclining, sitting, fretting, over-study, cooking, over-eating, gentle speech and demeanour, embracing, kissing, continence, celibacy, meetings, malevolent action.

Section Third.—More representative secondary pleasures and pains.

Examples.—Pleasures and pains of freedom of movement; restraint and captivity, occupation, idleness, security, insecurity and danger, presence of the opposite sex, absence of the opposite sex, aggression, conflict and triumph, cowardice, defeat, happiness of other human beings about us, misery of other human beings about us, regularity and harmony in our immediate surroundings, irregularity and mal-adjustment.

§ 8. In treating of the primary pleasures and pains our method of procedure was, generally speaking, synthetical. We followed the course of association, and gathered together the associated joys and griefs. In this chapter as well as the next we shall proceed in a greater degree analytically. Taking given groups of pleasures and pains it will be our task, after giving a fair exposition of the distinctive features of the group, to resolve it into the primary feelings. In so doing we shall find confirmation of our statements that the primary pleasures and pains here given are the ultimate. We shall also be enabled to note (as before) how complex and far-reaching are the associations and representations of these primary feelings. We will take a small number of the examples given under each of the above sub-divisions, and will treat them in the way just indicated.

CLOTHING.

§ 9. One prominent idea of the utility of clothing is its protective office to keep the body whole. This is not its only function, but it is one of the most important. Particularly is this seen in the matter of shoes for the feet; without these articles, the feet become sore, the skin abraded and lacerated, and great discomfort occasioned; with them the extremities are protected and the skin kept whole. In addition to the idea of protection from wounds, warmth is a prominent association connected with clothing; a thick coat or a heavy over-coat, furs and under woollens, all derive their comfortableness from their quality of imparting and retaining warmth. Further, the associations of sexuality are conspicuous in dress. Dress as opposed to nakedness has the value of putting a restraint on sexual gratification; while on the other hand dress in its refinements has often an alluring effect toward sexual delight. 'Of what other principle is a fashionable "full dress" (the satire of the term) an outgrowth? What else does a square neck signify? Why otherwise did one of our recent modes lead (supposably) well bred and modest school-girls to traverse the streets and horse-cars with a drapery sleeve baring their arms nearly to the armpit; and another not only cut out the necks of their dresses so as to expose the beautiful young flesh freely, but fasten a shining locket thereon to call attention to its grace and relieve its whiteness?'[1]

These three indicate the chief offices of clothing, and they are traceable to the three primary pleasures, integrity, heat, and sexuality. When we take into account blankets and bed-clothing, the idea of repose is also brought forward. The necessity of modifying clothing so as best to secure its chief ends and of so adapting it as not to interfere with movement lies at the foundation of the variations of Style and Fashion. The pleasures of society are also called up. Man modifies his organisation by raiment, and thereby adapts himself to the burning of the line or the freezing of the pole. His cosmopolitism depends upon his clothes. It is an observation of Wilkinson that under the tropics, where the climate tends to blacken and thicken the skin, white and thin garments are worn; whereas the inhabitant of temperate or frigid regions wraps himself in dark and heavy woollen fabrics. Thus clothing comes in as a supplemental force to preserve the equilibrium between man and nature. Clothes, like arts, manners, laws, and everything that beautifies our earthly state, are but new creations and extensions of our human nature. The vestures of the spirit are immortal, like the spirit itself. The Ancient of Days has 'a waistcoat of white wool'; 'fine linen is the righteousness of saints;' and the promise for all is of 'garments that wax not old.'[2]

The more representative pleasures derived from clothing are exemplified in its æsthetic uses. 'All noble draperies, either in painting or sculpture (colour and texture being at present out of our consideration) have, so far as they are more than necessities, one of two great functions; they are exponents of motion, and they are almost the only means of indicating to the eye the force of gravity which resists such motion. The Greeks used drapery in sculpture for the most part as an ugly necessity, but availed

[1] Eliz. Stuart Phelps, *What to Wear.*

[2] The Office of Clothes, *North Amer. Review*, Jan. 1867.

themselves of it gladly in all representation of action, exaggerating the arrangements of it which express lightness in the material and follow gesture in the person. The Christian sculptors, caring little for the body or disliking it, and depending exclusively on the countenance, received drapery at first contentedly as a veil, but soon perceived a capacity of expression in it which the Greek had not seen or had despised. The principal element of this expression was the entire removal of agitation from what was so pre-eminently capable of being agitated. It fell from their human forms plumb down, sweeping the ground heavily and concealing the feet; while the Greek drapery was often blown away from the thigh. The thick and coarse stuffs of the monkish dresses, so absolutely opposed to the thin and gauzy web of antique material, suggested simplicity of division as well as weight of fall. There was no crushing nor subdividing them. And thus the drapery gradually came to represent the spirit of repose as it before had of motion, repose saintly and severe. The wind had no power upon the garment, as the passion none upon the soul; and the motion of the figure only bent into a softer line the stillness of the falling veil, followed by it like a slow cloud by dropping rain; only in links of lighter undulation it followed the dances of the Angels.'[1] Here, as before, we find only primary pleasures—movement and rest. The pleasures associated with the texture of garments are mainly representative of those connected with the uses of the garments themselves. A garment of a poor texture does not give warmth or protection, and the ideas of cold and disintegration are hence associated with it; while a substantial fabric reproduces the pleasures of clothing in their fulness.

The pleasures of apparel, so far as they arise from colour, are more complex. I cannot undertake here to go into a discussion of the philosophy of colour. The pleasures and pains of colours are representative and complex feelings which are referable to original experiences of pleasure and pain occurring from the satisfaction of the basic wants of human nature or from denial of that which satisfies them. The primary pleasure of light is probably the primary pleasure most distinctively at the root of the delights of colour; and in the various gradations from light to darkness and in combinations of the same are found the pleasing and displeasing effects of varieties of hue. Sexuality is not a little concerned with colour.

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[1] *The Lamp of Beauty*; Ruskin, *Seven Lamps of Architecture.*

Another pleasurable association of clothing is that of neatness and cleanness. This is the general pleasure of cleanness as conducive to and supporting vitality.

§ 10. Such are some of the pleasures indicated by the name *clothing* and its equivalents. They are all resolvable into the primary pleasures. In a corresponding way the pains suggested by the term are resolvable into primary pains. Many of them have been specified. To the men oppressed by heat, clothing is disagreeable; to swimmers clothing is a hindrance; equally as to the athlete and the gymnast, or to the soldier when quick and unimpeded movements are necessary. To the eager lover the clothing of his mistress is a vexation and baffles his desires. The pains of excessive heat (*i.e.* of disintegration and prostration), of restraint of movement, of sexual denial, are more or less associated with clothing.

So too, the more æsthetic painful effects connected with drapery,—its over-abundance; its concealment of beauties; its disorder, its squalor, its distasteful colouring, are readily traceable to the primary pleasures and observed to be complex representations of them. Among the pains of unfashionable dress must be noted those of solitude; the fact that the garment is out of fashion tending to bring opprobrium upon its wearer and to isolate him from his associates. So also, among the pains of fashionable dress are to be instanced those of hunger and its attendants, and also of inaction and inability to move, the expense attendant upon such dress, often impoverishing and preventing the exercise of activities in desired directions or curtailing the alimentary enjoyments, bringing upon the victim all the ills of poverty.

§ 11. In the same category with clothing may be mentioned defensive armour, in the case of which the protective use is very conspicuous.

> 'Next his shert an haketon,[1]
> And over that an habergeon,
> For percing of his herte;
> And over that a fin hauberk,
> Was all ywrought of Jewes work,
> Ful strong it was of plate;
> And over that his cote armoure,
> As white as is the lily floure,
> In which he wold debate.'

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[1] Chaucer, *Rime of Sir Thopas*, verse 24 ff.

'First on his legs the well-wrought greaves he fixed,
Fastened with silver clasps, his ample chest
A breastplate guarded * * * *
* * * * * Next his shield
He took, full-sized, well-wrought, well-proved in fight.'[1]

OPIUM.

§ 12. Some references were made in the preceding chapter to the pleasures and pains derived from the consumption of opium. We will here make an epitome of those pleasures and pains so as to exhibit them together, and for this purpose refer the reader to De Quincey's 'Confessions.' First as to pleasures. In De Quincey's description a comparison is made between the effects of opium and wine, in which the drug is exhibited as a stimulant (increaser of vitality) producing 'chronic pleasure' in a 'steady and equable glow,' invigorating the 'self possession,' communicating 'serenity and equipoise to all the faculties,' giving a 'vital warmth' to the temper and moral feelings in general, giving also 'an expansion to the heart and the benevolent affections,' effecting 'a healthy restoration to that state which the mind would naturally recover upon the removal of any deep-seated irritation of pain that had disturbed and quarrelled with the impulses of a heart originally just and good;' the opium-eater 'feels that the diviner part of his nature is paramount; that is, the moral affections are in a state of cloudless serenity; and over all is the great light of the majestic intellect.' The opium-eater finds his susceptibilities to musical enjoyments heightened; in what manner thus appears:—opium, by greatly increasing the activity of the mind, generally increases of necessity that particular mode of its activity by which we are able to construct out of the raw material of organic sound an elaborate intellectual pleasure.' Opium also stimulates movement, but is rather prone to induce the search for solitude. 'Thus I have shown that opium does not of necessity produce inactivity or torpor; but that on the contrary it often led me into markets and theatres. Yet in candor I will admit that markets and theatres are not the appropriate haunts of the opium-eater, when in the divinest state incident to his enjoyment. In that state crowds become an oppression to him; music even, too sensual and gross. He naturally seeks solitude and silence, as indispensable conditions of those trances or profound reveries which are the crown and consummation of what opium can do for human nature.' The pleasures of opium are thus summed up by the author:—

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[1] Homer's *Il.* XI., 16 ff. Earl of Derby's trans.

'. . . . More than once it has happened to me on a summer night when I have been at an open window in a room from which I could overlook the sea at a mile below me and could command a view of the great town of L—— at about the same distance, that I have sat from sunset to sunrise motionless and without wishing to move. . . . The town of L—— represented the earth with its sorrows and its graves left behind; yet not out of sight nor wholly forgotten. The ocean, mid everlasting but gentle agitation and brooded over by dove-like calm, might not unfitly typify the mind and the mood which then swayed it. For it seemed to me as if then first I stood at a distance and aloof from the uproar of life; as if the tumult, the fever, and the strife were suspended; a respite granted from the secret burdens of the heart; a sabbath of repose; a resting from human labours. Here were the hopes which blossom in the paths of life, reconciled with the peace which is in the grave; motions of the intellect as unwearied as the heavens, yet for all anxieties a halcyon calm; a tranquillity that seemed no product of inertia, but as if resulting from mighty and equal antagonisms; infinite activities, infinite repose.

'O just, subtile, and mighty opium! that to the hearts of poor and rich alike, for the wounds that will never heal, and for the pangs that tempt the spirit to rebel, bringest an assuaging balm; —eloquent opium! that with thy potent rhetoric stealest away the purposes of wrath, and to the guilty man for one night givest back the hopes of his youth, and hands washed pure from blood; and to the proud man a brief oblivion for

"Wrongs unredressed and insults unavenged;"

that summonest to the chancery of dreams, for the triumphs of suffering innocence, false witnesses, and confoundest perjury, and dost reverse the sentences of unrighteous judges;—thou buildest upon the bosom of darkness, out of the fantastic imagery of the brain, cities and temples, beyond the art of Phidias and Praxiteles, beyond the splendour of Babylon and Hekatompylos; and "from the anarchy of dreaming sleep," callest into sunny light the faces of long-buried beauties, and the blessed household countenances, cleansed from the "dishonours of the grave." Thou only givest these gifts to man; and thou hast the keys of Paradise; oh just, subtile, and mighty opium.'

On a close examination of the foregoing quotations we are able to discover the following prominent ideas: invigoration, serenity, vital warmth, benevolent feeling, freedom from irritating pain, greater intellectual activity, solitude as allowing reverie, and dreams, quiet, repose. Still further reducing these, we have nothing but the familiar pleasures of functional vitality, movement, repose, and society. Invigoration, vital warmth, freedom from irritating pain, all are comprised under the first of these; greater intellectual activity belongs to the second; reverie, dreams, quiet, serenity are attached to the third, and benevolent feeling, together with the representations of past experiences in reverie, characterise the last. We can add to them also the associations of alimentation, and in a more remote relation all the other primary pleasures, but no analysis reveals anything else.

§ 13. Turning now to De Quincey's expositions of the pains of opium, we note a 'palsying effect upon the intellectual faculties,' 'prostration of the powers,' exalted states of irritability of the eye; 'deep-seated anxiety and gloomy melancholy,' distortion of space and time, 'unceasing restlessness night and day;' prostration of the system on abandoning the use of the drug or intermitting it, and horrible dreams. After a careful reading of the work of this gifted author, I am able to select these as being the chief pains indicated, and to say with some confidence in the accuracy of my assertion, that whatever others there may be are only subsidiary to those above given. It requires no argument to show that the latter are pains of irritation and prostration in large part. The pains of distortion of space and time are somewhat complex; they are pains chiefly because of their associations with disordered states of the body and mind; all the pains of disintegration and prostration are represented, and create anxiety and irritation. Moreover, distortion of time has the effect of apparently prolonging the pain one is actually suffering; and distortion of space may have a deterring and paralysing effect upon movement. The pains of opium dreams are representative pains of all past painful experiences woven together, integrated and redintegrated, and reproduced with great vividness. Therefore, as before we found only primary pleasures on a final analysis, so here we find only primary pains in greater or less representativeness.

BOOKS.

§ 14. The main pleasures and pains associated with the above term are undoubtedly those of society. Almost every allusion to the beneficial or evil effects of books which is made in literary criticism expresses or very directly implies their social character.

> 'Books, sweet associates of the silent hour,
>   What blessed aspirations do I owe
> To your companionship, your peaceful power,
>   High and pure pleasure ever can bestow.'[1]

'Except a living man, there is nothing more wonderful than a book:—a messenger to us from the dead, from human souls whom we never saw, who lived perhaps thousands of miles away; and yet these in those little sheets of paper speak to us, amuse us, terrify us, teach us, comfort us, open their hearts to us as brothers.'[2] 'A good book is the precious life-blood of a master spirit, embalmed and treasured up on purpose to a life beyond life.'[3] 'It is chiefly through books that we enjoy intercourse with superior minds; and these invaluable means of communication are in the reach of all. In the best books great men talk to us, give us their most precious thoughts and pour their souls into ours. God be thanked for books. They are the voices of the distant and the dead, and make us heirs of the spiritual life of past ages.'[4] The pleasures and the pains, then, which arise from communication with the mind of another are the pleasures and pains of books. They are substitutes for speech, and have some advantages over the more direct mode of communication. 'For the truth of the voice perishes with the sound. Truth latent in the mind is hidden wisdom and invisible treasure; but the truth which illuminates books, desires to manifest itself to every disciplinable sense, to the sight when read, to the hearing when heard; it moreover in a manner commends itself to the touch when submitting to be transcribed, collated, corrected and preserved. Truth confined to the mind, though it may be the possession of a noble soul, while it wants a companion, and is not judged of either by the sight or by the hearing, appears to be inconsistent with pleasure. But the truth of the voice is open to the hearing only, and latent to the sight (which shows many differences of things fixed upon by a most subtle motion, beginning and ending as it were simultaneously). But the truth written in a book, being not fluctuating but permanent, shows itself openly to the sight, passing through the spiritual ways of the eyes as the porches and halls of common sense and imagination; it enters the chamber of intellect, reposes itself upon the couch of memory, and there congenerates the eternal truth of the mind.

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[1] F. Hornblower. [2] Kingsley. [3] Milton. [4] W. E. Channing.

Lastly, let us consider how great a commodity of doctrine exists in books: how easily, how secretly, how safely they expose the nakedness of human ignorance without putting it to shame. These are the masters that instruct us without rods and ferrules, without hard words and anger, without clothes or money. If you approach them they are not asleep; if investigating you interrogate them, they conceal nothing; if you mistake them they never grumble; if they are ignorant they cannot laugh at you.[1] Of course all the pleasures and pains of knowledge are associated with books; the general illustration of these will be deferred to the next chapter.

As all of the primary pleasures and pains are connected with each other, so in the pleasures and pains of society as experienced with and from books, are involved in varying degrees the other primary feelings.

CITIES.

§ 15. Under the term city or village, is indicated another group of pleasures and another class of pains which are referable chiefly to society. The idea of a village or city (we will not draw any distinction here between the two) is that of an aggregation of human beings in a community. Our thoughts are then carried back to those pleasures and pains which appertain to the dwelling of men together. And as civilisation increases the means for gratifying the fundamental needs, so the other primary pleasures become also attached to the idea of a community of men; so likewise as there are many deteriorating and pain-giving influences in a crowded theatre of human action, these all in their turn combine to form the associated pains which such a name as the one at the head of this section suggests.

§ 16. The general social value of centres of population in the propagation of civilising ideas and social forms is described in the following: 'I bless God for cities. I recognise a wise and gracious providence in their existence. The world had not been what it is without them. The disciples were commanded to

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[1] Bishop of Durham, *Philobiblion.*

"begin at Jerusalem," and Paul threw himself into the cities of the ancient world, as offering the most commanding positions of influence. Cities have been as lamps of light along the pathways of humanity and religion; within them science has given birth to her noblest discoveries; behind their walls freedom has fought her noblest battles; they have stood on the surface of the earth like great breakwaters, rolling back or turning aside the swelling tide of oppression; cities, indeed, have been the cradles of human liberty; they have been the radiating active centres of almost all Church and State reformation.'[1]

On the other hand we have these pictures of the evils of cities.

'Soon my path
Grew close and darker. 'Twas a mean, foul street
Where poor mechanics toil, and toil, and toil
By day and through the night. Tall chimneys rose
Into the air, and puffed their sooty breath
Into the face of heaven. Lights flared abroad
Through many a window, and the ringing sound
Of hammers broke the silence; the dull beat
Of loom and shuttle, and the thousand tongues
That giant labour clamoureth withal.
Lank, sallow, lean-jawed men; women, whose cheeks
Were white and drawn, whose eyes were sunk and dull;
Children, whose tiny faces, sharp and shrunk,
Put years upon them; the precocious growth
Of those that knew no sport, save toil that ate
Into their little hearts and drained away
One half their youthful blood.'[2]

We notice here evils of dirt (which we have already connected with disease and prostration); of toil (prostration, irritation); of bad air (suffocation); blinding light (disintegration); noise and tumult (irritation, prostration), and prostration and disintegration directly, as seen in the faces and forms of the people we meet.

The evils of towns and cities which affect character, which are expressed by the terms *poverty*, *ignorance*, *crime*, *sin*, will be discussed hereafter.

Goldsmith's 'Deserted Village' gives a delightful picture of village social enjoyments, and of the general peace, quiet and rest belonging to the 'loveliest village of the plain.' Here village delights, as contrasted with the hurry and worry of cities, are shown forth.

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[1] Dr. Guthrie.

[2] Southgate's Coll.

SUNSET.

§ 17. The second section of pleasures and pains of this general class are, it will be observed, indicated by words referring to action or condition of something rather than to the thing itself. If there were mentioned to us the pleasures of books, we would include them under the first subdivision before spoken of; if there were specified the pleasures of reading, we should refer them to the second subdivision, though by the two terms substantially the same pleasures might be marked. So the pleasures of the sun belong to the first; those of the *sunset* to the second subdivision. It will also be considered, I trust, that these subordinate groupings are only made here because they actually are made in ordinary speech and literature. Men speak both of the pleasures of reading and the pleasures of books; though essentially the same pleasures are represented in the two cases, there may be slight shades of difference. In the former case, for instance, the idea of reading may call up prominently pleasures of repose, as of some luxurious chair or sofa on which we recline while reading; in the latter case the term *books* may scarcely at all suggest repose—at any rate not conspicuously. To meet, therefore, all these variations, sub-classes are made; but it cannot be too strongly impressed upon the reader that they do not indicate essential differences in the pleasures themselves, but they all only mark primary pleasures as represented with different objects and their different associations. Among the pleasurable associations of sunset are those of repose, as the hour for rest draws near, when the light of the sun is withdrawn. 'Nothing more tends to soothe and recreate the imagination than a beautiful prospect on a fine summer's evening, when the sun gilds every object with his parting beams, while a few solitary clouds travel slowly along the sky, and all creation smiles before sinking into repose.'[1]

The æsthetic pleasures of the sunset are largely those of colour, also the varied combinations of hues and shades delighting the eye. In the preceding chapter, under 'Light' was given one of the many superb descriptions of the sunset; this will supersede the necessity of an illustration in this place. The æsthetic pleasures, as such, have been treated in a former part of this work. I think the glories of sunset are glories to us in a measure also because the pleasurable associations of light and heat are increased by the apprehension, in the waning of the sun's power, of their loss. 'Blessings brighten as they take their flight.' With bright colours are associated all the pleasures of light:—heat, vitality, motion; and with the sombre colours, repose, solitude, death. This contrast is well illustrated on a page of Ruskin's 'Modern Painters (Part II., Sec. II., Ch. II.): 'I cannot call it colour, it was conflagration. Purple and crimson and scarlet like the curtains of God's tabernacle, the rejoicing trees sank into the valley in showers of light, every separate leaf quivering with buoyant and burning life; each, as it turned to reflect or to transmit the sunbeam, first a torch, then emerald. Far up into the recesses of the valley, the green vistas arched like the hollows of mighty waves of some crystalline sea, with the arbutus flowers dashed along their flanks for foam and silver flakes of orange spray tossed into the air around them, breaking over the grey walls of rock into a thousand separate stars, fading and kindling alternately as the weak wind lifted and let them fall. Every glade of grass burned like the golden floor of heaven, opening in sudden gleams as the foliage broke and closed above it, as sheet lightning opens in a cloud at sunset.' Now follow the associations of repose with the contrasted dark colours: 'the motionless masses of dark rock —dark, though flushed with scarlet lichen, casting their quiet shadows across its restless radiance, the fountain underneath them filling its marble hollow with blue mist and fitful sound; and over all, the multitudinous bars of amber and rose, the sacred clouds that have no darkness, and only exist to illumine, were seen in fathomless intervals between the solemn and orbed repose of the stone pines, passing to lose themselves in the last white, blinding lustre of the measureless line, where the campagna melted into the blaze of the seas.'[1]

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[1] Southgate's Coll.

§ 18. Among the painful associations of sunset might be mentioned those of cold—the frost after nightfall, the chill wind or the zero temperature. So also often the associations of malarial disease, and indeed all the terrors of night, are attached to sunset.

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[1] These passages, though not descriptive of a sunset in the author's work, might be employed for such a purpose without any impropriety; in *Modern Painters* they describe a landscape scene when the sun is breaking out from a cloud after rain.

TEMPERANCE.

§ 19. This word has reference to a state of health and content produced by a prudent restraint of appetites and to the practice of that restraint itself. 'Temperance gives nature her full play, and enables her to exert herself in all her force and vigour.'[1] Says Burke, 'Our physical well-being, our moral worth, our social happiness, our political tranquillity, all depend on that control of all our appetites and passions which the ancients designated by the cardinal virtue of *temperance*.'[2] The pleasures of integrity and vitality are amply concerned to make up the pleasures of temperance:—

> 'Of all God's workes, which doe this worlde adorne,
> There is no one more fair and excellent
> Than is man's body both for powre and forme,
> Whiles it is kept in sober government.'[3]

If then temperance invigorates human faculties, we may note some of the advantages of such invigoration. 'In proportion as we awaken and invigorate men's faculties, we help them to rise above a brutal life; we take them out of the power of the present moment, enlarge their foresight; give them the means of success in life, open to them sources of innocent pleasure, and prepare them to bear part in respectable society.'[4] All our pleasures are increased, we are enabled to ensure a longer continuance of them, and our social advantages are augmented by the invigoration which temperance secures. In somewhat the same line is the testimony of Edward Baines:—I believe I have done more work, have had better spirits, have eaten my food with greater relish, and have slept more tranquilly than I should have done if I had habitually taken wine or beer.'[5] Pleasures of exercise, of vitality, of alimentation and of repose, are thus constituents of the pleasures of temperance. Similarly, with regard to high mental achievements (pleasures of movement and exercise also): 'It is the mighty minds that have grappled most successfully with the demonstrations of mathematical, intellectual, and moral science, that stand highest in the scale of mental acumen and power, and it is such minds that have found strict temperance in diet essential to their success. . . . Few men have more fully established their claims to intellectual superiority of a very high grade than that American theologian, President Edwards. But it was temperance alone that could carry him through such powerful mental efforts. 'Though of a delicate constitution, by the rules of temperance he enjoyed good health, and was enabled to pursue his studies thirteen hours a day,' etc.[1] If therefore you wish for a clear mind, and strong muscles, and quiet nerves, and long life, and power prolonged in old age, permit me to say, although I am not giving a temperance lecture, avoid all drinks above water and mild effusions of that fluid, shun tobacco, opium, and everything else that disturbs the normal state of the system; rely upon nutritious food, and mild diluted drinks of which water is the base, and you will need nothing beyond these things except rest and due moral regulations of all your powers to give you long, happy, and useful lives, and serene evening at its close.'[2]

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[1] Addison. [2] *Letters on a Regicide Peace.* Letter III.
[3] Spenser, *Faerie Queene*, Bk. II. Canto 64. [4] W. E. Channing, *On Temperance.*
[5] *The Temperance Handbook*, p. 699. London, 1871.

§ 20. In order to a complete survey of the pleasures of temperance it would be necessary for us to observe the pains of intemperance, and probably the best illustrations of those pleasures are obtained by studying the opposite pains and conceiving the advantages of temperance to lie in immunity from those pains. We will not be able in our space to give more than a brief epitome of the ills of intemperance. The following is an excellent condensed description:—

> 'Here only by a cork controlled,
> And slender wall of earthen mould,
> In all the pomp of death, repose
> The seeds of many a bloody nose;
> The stammering tongue, the horrid oath;
> The fist for fighting nothing loth;
> The giddy thought on mischief bent,
> The midnight hour in riot spent;
> The passions which no word contain,
> Which burst like sulphur into flame;
> The nose carbuncled, glowing red;
> The blackened eye, the broken head;
> The tree that bears the deadly fruit
> Of murdering, maiming, and dispute,
> Assault that innocence assails;
> The images of gloomy jails:
> All these within this jar appear,
> And Jack the hangman in the rear.'[3]

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[1] *Temperance Handbook*, p. 45.

[2] Professor Silliman's Lecture.

[3] *Lines on a Stone Jar*. Anon.

Here again, to begin with, comes disintegration of the body; then follow the pains attendant upon aggression and conflict, namely disintegration, irritation, inability to move (confinement), social opprobrium and death.

Robert MacNish, in his 'Anatomy of Drunkenness,' particularly mentions the disorders to which drunkenness leads; they are all comprised under the heads of disintegration, prostration, irritation, and sexual denial. It injures and effects the functions of the liver, the stomach, the brain, the kidneys, the bladder, the blood, the lungs, the eyes, the skin; induces inflammations, gout, tremors, palpitation of the heart, hysteria; epilepsy, sterility, emaciation, corpulency, ulcers, melancholy, madness, and premature old age. Beyond these are all the ills within the departments of sexuality and society. As regards the former, the deleterious effects of intemperance upon domestic happiness may be referred to; and as bearing upon the latter more especially I will quote the heads of a lecture on 'The Evils of Intemperance,' by Dr. Lyman Beecher:—[1]

'1. The effects of intemperance upon the health and physical energies of a nation are not to be overlooked, or lightly esteemed.'

'2. The injurious influence of general intemperance upon national intellect is equally certain and not less to be deprecated.'

'3. The effect of intemperance upon the military powers of a nation cannot but be great and evil.'

'4. The effect of intemperance upon the patriotism of a nation is neither obscure nor doubtful.'

'5. Upon the national conscience or moral principle the effects of intemperance are deadly. It obliterates the fear of the Lord and a sense of accountability, paralyses the power of conscience, hardens the heart, and turns out upon society a sordid, selfish, ferocious animal.'

'6. Upon national industry the effects of intemperance are manifest and mischievous.'

'7. The effects of intemperance upon civil liberty may not be lightly passed over.'

In the terms 'health and physical energies' primary pleasures are indicated; under intellectual energy and activity we find movement, exercise, and nervous vitality. So also under 'military powers' with the superadded .predatory pleasures (alimentation);

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[1] Boston, 1852.

movement and exercise explain 'industry,' while pleasures of patriotism and conscience have direct reference to the social feelings, devotion to, interest in, and fear of others. Likewise the pleasures of society, and of movement and exercise, are the pleasures of liberty. Thus, from observing the evils of intemperance, we bring into view more sharply the opposite pleasures of temperance, and here as elsewhere find nothing but primary feelings.

THINKING.

§ 21. Thinking is mental activity. We can only judge of the pleasure of thinking in itself by our horror at the thought of annihilation or of idiocy. Entire absence of thinking is absence of consciousness, and if we had no consciousness we should have no pain; whatever pleasure there is in thinking, as such, is the pleasure of life as contrasted with the pain of death, and this contrast we shall make in the next chapter. What we ordinarily understand by the pleasures of thinking are represented pleasurable experiences. They are not a new kind of pleasurable experiences, but are repetitions of pleasurable experiences of the same kind. If we are thinking of action, the pleasure is the represented pleasure of that action; if of repose the pleasure is the represented pleasure of repose. If we have in mind a feast, our delight is a represented delight of alimentation; if we are ideally contemplating a sunset, our joy is the represented joy of seeing a sunset. Our pleasure is not then a pleasure of thinking as distinguished from not thinking, since we have no experience of either pleasure or pain as appertaining to the latter; but a pleasure in some thinking over some other thinking, or, as has just been remarked, a pleasure in representing pleasurable experiences. In equal measure the pain of thinking is a pain of represented painful experiences. The pain of long continued thinking or concentration upon some train of thought is the pain of irritation and prostration. On the other hand, the pleasures of studying are the pleasures of movement and exercise; society, repose, and, in representative association, all the pleasures that knowledge brings. Whatever pleasures mental discipline furthers and secures may be associated with the pleasures of thinking; and in putting this enlarged sense upon the term we shall pass into the region of the tertiary feelings.

GENTLE SPEECH AND DEMEANOUR.

§ 22. Among the primary appetitive cravings of human nature is that for the amicable presence of other human beings; man has a yearning for society. Whatever then conduces to satisfy this want is desirable and pleasurable. In such a case are found gentle speech and demeanour; their pleasures are eminently social, and have their root in the primitive pleasure of society.

'Speak gently: in this world of ours
Where the clouds o'ersweep the sky,
And sweetest flowers and fairest forms
Are ever first to die:
Where friendship changes, and the ties
That bind fond hearts are riven,
Mild, soothing words are like the stars
That light the midnight heaven.'[1]

The prevailing idea of this stanza is that the greatest pleasures are apt to flee away, and among them the social; that hence gentleness as a preservative and augmenting force to such joys is worthy of all praise. In its effect it is as light in darkness.

That gentleness of speech and demeanour are pleasures which have their origin in and derive their force from society, sufficiently appears in the consideration that the terms have no relevancy whatever, except on the supposition of the presence of others. The advantages of such a demeanour accrue either to the one practising it with reference to others, or to one receiving it from others about us; these will be considered presently: the utilities to the one receiving it are the general pleasures of society.

The term 'gentlemanliness' includes many and varying qualities. Perhaps the following quotations express the chief of them; their social character is very evident. The 'gentleman is never unduly familiar; takes no liberties; is chary of questions; is neither artificial nor affected; is as little obtrusive upon the mind or feelings of others as on their persons; bears himself tenderly towards the weak and unprotected, is not arrogant, cannot be supercilious, can be self-denying without struggle, is not vain of his advantages, extrinsic or personal; habitually subordinates his lower to his higher self; is, in his best condition, electric with truth, buoyant with veracity.'[2] 'To be humble-minded, meek in spirit, but bold in thought and action; to be truthful, sincere, generous, to be pitiful to the poor and needy, respectful to all men; to guide the young, defer to old age; to enjoy and be thankful for our own lot and to envy none—this is, indeed, to be gentle, after the best model the world has ever seen.'[1]

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[1] Anon.

[2] *The Gentleman.* Calvert.

But the best summing-up of the traits and acts that indicate a gentleman or gentlewoman occurs in the two following passages, both very celebrated. I give them in order of their antiquity, though the latter is rather better expressed.

Κατὰ ταὐτὰ δὲ ταῦτα καὶ περὶ τὰ τῶν ἄλλων ἐγὼ δρώην νοῦν ἔχων ἔμφρονα. 'And may I being of sound mind do unto others as I would that they should do unto me.'[2]

Πάντα οὖν ὅσα ἂν θέλητε ἵνα ποιῶσιν ὑμῖν οἱ ἄνθρωποι, οὕτω και ὑμεῖs ποιεῖτε αὐτοῖs. 'Therefore all things whatsoever ye would that men should do to you, do ye even so to them.'[3]

Among the pains of gentle speech and demeanour may be instanced those springing from an inability sometimes arising in those who are habituated to speak and act gently, to manifest or maintain a proper opposition against aggression. Such persons are often imposed upon, sometimes oppressed and abused by reason of their lack of combativeness. They will suffer rather than contend. The idea of such a suffering connected with the gentle life is well brought out in the lines of Deckar:—

> 'The best of men
> That e're wore earth about him was a sufferer,
> A soft, meek, patient, humble, tranquil spirit;
> The first true gentleman that ever breathed.'

MALEVOLENT ACTIONS.

§ 23. The pleasures indicated by these terms are in part those of action offensive, and in part those of action defensive. In the former aspect they are substantially identical with the pleasures of aggression and conflict already named and to be described hereafter. They have their root in the predatory appetites. The pleasures of defensive action take their rise from the instincts of self-preservation, and are those of integrity and vitality. Action with a view to injure another may be offensive or defensive; a man may inflict blows or wounds in self-defence and yet with intent to hurt his adversary. Leaving illustration of aggressive malevolent action to a succeeding section, I will give one or two quotations exemplifying the defensive side and showing the utilities of malevolent action. The first is from Dr. Reid.[1] 'Man in his present state is surrounded with so many dangers from his own species, from brute animals, from everything around him that he has need of some defensive armour that shall always be ready in the moment of danger. This reason is of great use for this purpose when there is time to apply it. But in many cases the mischief would be done before reason could think of the means of preventing it.

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[1] *The Gentle Life.* London, 1866.

[2] Plato, *Leges*, Bk. II. Jowett's trans.

[3] Gospel according to St. Matthew, vii. 12.

'The wisdom of nature has provided two means to supply this defect of our reason. (1) One of these is the instinct before mentioned, by which the body upon the appearance of danger is instantly and without thought or intention put in that posture which is proper for preventing the danger or lessening it. . . . (2) But as offensive arms are often the surest means of defence by deterring the enemy from an assault, nature hath also provided man and other animals with this kind of defence by that sudden resentment of which we now speak, which outruns the quickest determinations of reason and takes fire in an instant, threatening the enemy with retaliation. . . . It is sufficiently evident upon the whole that this sudden or animal resentment is intended by nature for our defence. It prevents mischief by the fear of punishment. It is a kind of penal statute promulgated by nature, the execution of which is committed to the sufferer.'

The second quotation is from Bentham.[2] 'This subject [3] does not demand many particular rules, every species of satisfaction naturally bringing in its train punishment to the defendant, a pleasure of vengeance for the party injured.

'This pleasure is a gain: it recalls the riddle of Samson; it is the sweet which comes out of the strong; it is the honey gathered from the carcase of the lion. Produced without expense, net result of an operation necessary on other accounts, it is an enjoyment to be cultivated as well as any other; for the pleasure of vengeance considered abstractedly is, like every other pleasure, only good in itself. It is innocent so long as it is confined within the limits of the laws; it becomes criminal at the moment it breaks them. It is not vengeance which ought to be regarded as the most malignant and most dangerous passion of the human heart; it is antipathy, it is intolerance—these are the enmities of pride, of prejudice, of religion, and of politics. In a word, that enmity is not dangerous which has foundation, but that which is without a legitimate cause.

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[1] *Active Powers of the Human Mind*, Essay III. Part II. Chap. VI.

[2] *Principles of Penal Law*, Part I. Chap. XVI.

[3] 'Vindictive satisfaction.'

'Useful to the individual, this motive is also useful to the public, or to speak more correctly, necessary. It is this vindictive satisfaction which often unties the tongue of the witnesses; it is this which generally animates the breast of the accuser and engages him in the service of justice, notwithstanding the trouble, the expense, the enmities to which it exposes him; it is this which overcomes the public pity in the punishment of the guilty. . . . The forgiveness of injuries is a virtue necessary to humanity; but it is only a virtue when justice has done its work, when it has furnished or refused a satisfaction. Before this, to forgive injuries is to invite their perpetration—is to be not the friend but the enemy of society. . . .

'Inflict the punishment which is deserved, and the injured party may draw from it the degree of enjoyment which his situation yields and of which his nature is susceptible.'

Let us note also the following from the same author:—

'But if in lieu of the constituted authorities, the members of the community at large be considered as the persons by whom punishment is inflicted; then is all punishment an act of self defence in relation to the particular species of evil with which the offence thus punished is pregnant; an act tending to defend the community against offences of the sort in question with their attendant evils, viz. by means of reformation, disablement, and determent, one or more of them as above.

'In the signification of the word self-defence, it is implied that the evil against which the party is endeavouring to guard himself has for its cause an act done by some sentient being with the intention of producing that same evil.

'The word self-preservation is alike applicable whatsoever be the source or quarter from which the evil is considered as about to come. In so far therefore as the act of punishment is with propriety capable of being termed an act of self-defence, it is with the same propriety capable of being termed an act of self-preservation.'[1] 'Notwithstanding their deformity, the malevolent passions are always at least useful as means of defence as securities against the invasions of personal interest.'[2]

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[1] *Principles of Penal Law*, Part II. Bk. I. Chap. I. [2] *Ibid.* Part III. Chap. IV.

§ 24. The names *war* and *anger*, *hatred*, *cruelty* in their association suggest most of the pains of malevolent action; these may be considered with reference to the individual inflicting the pain, to the sufferer and also the general social effect. I think the most vivid portraitures of the social ills of malevolent action with which I am acquainted are found in Seneca's 'De Ira.' There is much to be found in this work both upon the social and the individual evils resulting from and attending malevolent passions that I shall refer the reader to it without giving any particular quotations. Under the head of the pains associated with the idea of society there have been illustrated sufficiently the social woes, and the pains which those who suffer from malevolent action receive. We will therefore content ourselves with noting in two selections some of the ill effects which he who performs deeds of malevolence is liable to encounter. Before doing this, however, we will stop to observe in the following lines how our ideas on reading pass from the social to the individual miseries of anger and hatred and associate them together.

> 'Full many mischiefs follow cruel wrath:
> Abhorred bloodshed and tumultuous strife,
> Unmanly murder and unthrifty scathe,
> Bitter despite with rancour's rusty knife,
> And fretting grief, the enemy of life;
> All these and many evils more haunt ire,
> The swelling spleen, and phrenzy-raging rife,
> The shaking palsy and Saint Francis' fire.'[1]

Chalmers thus describes the subjective pain of malevolence outside of remorse (Dr. Reid, not considering that a utility is a pleasure, after one of the passages quoted in the last section almost goes to the extent of denying that there are pleasures in malevolence. Stewart follows Reid closely). 'The most ordinary observer of his own feelings, however incapable of analysis, must be sensible, even at the moment of wreaking in full indulgence of his resentment on the man who has provoked or injured him, that all is not perfect and entire enjoyment within; but that in this, and indeed in every other malignant feeling, there is a sore burden of disquietude—an unhappiness tumultuating in the heart and visibly pictured on the countenance. The ferocious tyrant, who has only to issue forth his mandate and strike dead at pleasure the victim of his wrath, with any circumstance too of barbaric caprice and cruelty which his fancy, in the very waywardness of passion unrestrained and power unbounded might suggest to him—he may be said to have experienced through life a thousand gratifications in the solaced rage and revenge which, though ever breaking forth on some new subject, he can appease again every day of his life by some new execution. But we mistake if we think otherwise, than that in spite of these distinct and very numerous, nay daily gratifications, if he so choose, it is not a life of fierce internal agony notwithstanding. . . . He is little conversant with our nature who does not know of many a passion belonging to it, that it may be the instrument of many pleasurable, nay delicious or exquisite, sensations, and yet be a wretched passion still—the domineering tyrant of a bondsman who at once knows himself to be degraded, and feels himself to be unhappy. A sense of guilt is one main ingredient of this misery; yet physically, and notwithstanding the pleasure or the relief inseparable at the moment from every indulgence of the passions, there are other sensations of bitterness which of themselves and apart from remorse would cause the suffering to preponderate.[1]

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[1] Spenser's *Faerie Queene*.

RESTRAINT AND CAPTIVITY.

§ 25. The prominent associations suggested by these words are painful; and the pains are understood by comparison with the pleasures of freedom of movement. Considering these pains and the opposed pleasures as secondary, we should not here introduce all those pleasures and pains which are embraced under the wider terms, *liberty* and *slavery* or *bondage*, although it is very difficult to keep the mind from running on to include them. But in the present case reference is had to those pains which ensue from a restraint of movement. Yet they go a little beyond mere physical confinement, and embrace the ills of a freedom limited beyond what is enjoyed by many of those about us. The term *restraint* may be regarded as inclusive of more than *captivity*; it may often refer chiefly to mental restraint. Without, however, attempting or being able to mark out very definitely the limits of the meaning of these words, we will note a few associations attached thereto. The prime idea is that of inability to move as opposed to the pleasure of movement. With this are connected many other pains and some pleasures, as has been seen in the foregoing chapter.

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[1] *Adaptations, etc., Bridgewater Treatise.*

First, imprisonment:

'’Tis a weary life this—
Vaults overhead and grates and bars around me,
And my sad hours spent with as sad companions,
Whose thoughts are brooding o'er their own mischances
Far, far too deeply to take part in mine.'[1]

The salient idea here is that of prostration; irritation and solitude are also obvious. Still more evident is the idea of prostration in these verses.

'See yon pale wretch—observe his vacant stare,
His lustre-lacking eye and matted hair;
His squalid hands, his soiled and tatter'd dress,
Symbols at once of want and low excess.'[2]

The usual evil passions attendant upon imprisonment and arising in the mind of the prisoner should be considered. Montgomery has likewise depicted some of the ameliorations of imprisonment. The following lines will serve as a specimen; they are curious because the pleasures arise largely from the idea of freedom itself; the prison is a boon because it preserves, secures liberty.

'Secured by bolts and snug in chains;
When innocence and guilt together
Roost like two turtles of a feather;
Where debtors safe at anchor lie
From saucy duns and bailiffs sly;
Where highwaymen and robbers stout
Would rather than break in, break out;
Where all's so guarded and recluse
That none his liberty can lose;
Here each may, as his means afford,
Dine like a pauper or a lord,
And those who can't the cost defray
May live to dine another day.'[3]

Having one's living provided without trouble or expense is no mean consideration in favour of imprisonment. Instances are far from being rare of people soliciting imprisonment for that very reason. Captivity may imply restraint of locomotion, it may imply dependence, it may imply hard labour, it may imply torture, it may mean death. In addition may be instanced the griefs of being separated from family, friends, home, and familiar society generally. The Lamentations of Jeremiah are full of them, as also, for instance, the accounts of the sufferings of captives taken for the purposes of the African slave trade.

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[1] Anon. [2] *Ibid.* [3] James Montgomery

§ 26. There we find pains of loss of home, relatives, wives, and social pains generally; famine, prostration, sexual abuse, maiming, irritation, death. As we have already seen, these are resolvable into primary pains of disintegration, prostration, inability to move, irritation, hunger, sexual denial.

In addition to what has gone before, I will cite the following stanza in exemplification of some of the representative evils of restraint of mental progress. Captivity and restraint are fatal to genius, that is, to high intellectual achievement. Some of the pleasures of knowledge and skill are thus cut off, and knowledge and skill we reserve for the next chapter.

> 'Yet here thou sit'st while earth and heaven
> Are to thy radiant empire given;
> Alas! I see the manacle!
> And all thy soul has felt the steel;
> Thy wing of fire, thy beauty, vain—
> For genius dies beneath the chain.'[1]

A beneficial result of captivity is that it brings sometimes the captives under the influences of a higher civilisation than their own. Their manners are softened, their morals improved, their intellects brightened. These are among the advantages of a better society. 'No fact is plainer than that the blacks have been elevated and improved by their servitude in this country. We cannot possibly conceive indeed how Divine Providence could have placed them in a better school of correction.'[2] Persons enlisted in the service, in the army or in the navy, are under restraint and experience many of the pains of captivity; they also derive many important advantages of discipline, and besides earn the honour and glory which comes from serving their country.

OCCUPATION.

§ 27. Occupation is obviously movement and exercise, but as ordinarily used, refers to something as the object of activity, and its pleasures are connected very closely with those of alimentation. That I am occupied, means that I am doing something. As contrasted with idleness it signifies effort directed to some end. It may include physical or mental labour; it may indicate work, or it may indicate play (though usually not). The following synonyms bring up many of the associations;—business, employment, engagement, avocation, vocation, calling, profession, pursuit, trade, craft.

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[1] Rev. George Croly, *Genius Bound.*

[2] Bledsoe, *Liberty and Slavery.* Phila. 1856.

> 'Nature lives by labour,
> Beast, bird, air, fire, the heavens and rolling world
> All live by action; nothing lives at rest
> But death and ruin. Man is born to care;
> Fashioned, improved by labour; this of old
> Wise states observing gave that happy law,
> Which doomed the rich and needy, every rank,
> To manual occupation, and oft called
> Their chieftains from the spade, or furrowing plough,
> Or bleating sheepfold. Hence utility
> Through all conditions; hence the joys of health;
> Hence strength of arm, and clear, judicious thought;
> Hence corn, and wine and oil, all in life
> Delectable. What simple nature yields
> And nature does her part are only rude
> Materials, cumbers of the thorny ground·
> 'Tis toil that makes them wealth.'[1]

'If it were not for labour, men could neither eat so much, nor relish so pleasantly, nor sleep so soundly, nor be so healthful, nor so useful, so strong, nor so patient, so noble, nor so untempted.'[2] Occupation is necessary to life; that is, without it there would be disintegration and prostration; it is necessary to health—that is, by it are procured the pleasures of integrity and vitality; by occupation we obtain food and the pleasures of alimentation; health, wealth, and wisdom come from occupation. The social pleasures of usefulness and nobility of character also are connected with occupation. Here we have only primary pleasures and some tertiary, the latter of which we are reserving.

Sometimes the pleasures of repose are connected with the idea of occupation. We often hear it said that the object of labour is that by-and-bye we may obtain rest; sound sleep has just been referred to as a delight associated with work.

There are innumerable grades of occupation, ranging from those employments which are described by the term *manual labour*, to the highest forms of mental activity. We have just seen what are the chief pleasures involved in those varieties of occupation which are characteristically exercises of the body. Mental occupation brings in, of course, more highly representative associations. There is some mental occupation connected with every movement and with all exercise. The ploughman needs some degree of intellectual exercise in directing the plough, and the sower some intelligence in sowing the seed. In these cases the pleasures are those of movement and exercise, with all the associations of alimentation, society, vitality, etc. In employment more exclusively mental, as studying, the pleasures are those of society, as the student is brought into contact with other minds; those of repose, as frequently he is removed from scenes of turmoil and confusion; of alimentation, as the fruit of his studies may be bread for himself; of vitality and integrity, as by his efforts all that tends to preserve life and enhance its joys may be secured; if movement and exercise is in what he is doing, activity and energy are put forth. 'Studies serve for delight, for ornament, and for ability. Their chief use for delight is in privateness and retiring [repose]; for ornament, is in discourse [society]; and for ability is in the judgment and disposition of business [movement, alimentation, society]; for expert men can execute, and perhaps judge of particulars one by one; but the general counsels and the plots and marshalling of affairs come best from those that are learned.'[1]

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[1] Dyer.

[2] Jeremy Taylor.

§ 28. The pains of occupation are characteristically those which are indicated by the words *tired* and *weariness*. Obviously these are pains of prostration, and close following are those of disintegration.

IDLENESS.

§ 29. The pleasures of occupation are better understood by a contrast with the pains of idleness. Says Pascal, 'There is nothing so insupportable to man as to be in entire repose, without passion, occupation, amusement, or application. Then it is that he feels his own nothingness, isolation, insignificance, dependent nature, powerlessness, emptiness. Immediately there issue from his soul ennui, sadness, chagrin, vexation, despair.'[2]

Without entering upon an exposition of the pains of idleness, it will be sufficient to remark that they are obviously nearly, if not quite, coincident with the pains of inaction, to some extent illustrated in the preceding chapter. Some of the pleasures of idleness too were there indicated, as will be remembered.

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[1] Bacon.

[2] *Pensées*, Art. 25, 26.

SECURITY—INSECURITY.

§ 30. The pleasures of security are those arising from a knowledge that one's circumstances are such as to put at a distance a given class of pains, if the security has reference to some particular evil, or pains generally, if the term is general in its application. When a person is secure, he is safe, beyond harm, undamaged, unhurt. The pleasures and pains within the scope of this title are hence in a very considerable degree representative; and they are also to a great extent negative. The burnt child dreads the fire. Having a representation of the pain occasioned by the fire in the proximity of fire he has a more vivid representation and a feeling of insecurity or danger; when if removed from the neighbourhood of the offending element he chances to think of fire there is a twinge of representative pain followed by a pleasurable reaction, as he considers there is no harm to be apprehended from it. Here is a nucleus of the pleasures of security, and from many such experiences and extended and complex representations of such experiences they spring and subsist. They are not themselves primary pleasures, but they are pleasures resulting from knowledge or belief of the absence (more or less complete), or remoteness of causes tending to produce the primary pains.

Of the advantages of security in its most general meaning as affecting nations and the progress of civilisation, Bentham has very fully treated.[1]

He depicts the deterioration consequent upon gradually growing or sudden insecurity, shows the evil of a chronic state of insecurity, and by contrast exemplifies the happiness which security brings.

There are pains connected with security, often those of restraint. There are also pleasures connected with insecurity. The latter sometimes affords scope for the predatory appetites, and frequently a state of danger brings out qualities that are admirable and praiseworthy, and themselves productive of benefits to mankind.

> 'The gods in bounty work up storms about us,
> That give mankind occasion to exert
> Their hidden strength and throw out into practice
> Virtues which shun the day and lie concealed
> In the smooth seasons and the calms of life.'[2]

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[1] *Principles of the Civil Code.*

[2] Addison, *Cato*, Act I. Sc. IV.

AGGRESSION, CONFLICT, TRIUMPH.

§ 31. This class exhibits chiefly pleasurable feelings (though the pains are not wanting). These pleasurable feelings are traceable to two principal sources, the delights of movement and exercise and those of alimentation. More remotely they are connected with self-defence and thus with the pleasures of integrity. For often representative cognitions forecasting events impel to movements of aggression which are deemed to be necessitated by the exigencies of self-defence. The more presentative pleasures of aggression take their rise as has been before stated from the predatory instincts, and are thus founded upon movement and alimentation. There is a positive presentative pleasure in the infliction of injury upon others, which prevails to a greater or less degree in all (or almost all) individuals.

> 'Et qui nolunt occidere quenquam
> Posse volunt.'
>
> 'Tis nature thus; even those who want the will
> Pant for the dreadful privilege to kill.'[1]

'Au milieu de la compassion nous sentons au-dedans ie ne sçais quelle aigre-doulce poincte de volupté maligne à veoir souffrir altruy; et les enfants la sentent.' 'Even in the midst of compassion we feel within I know not what tart-sweet titillation of malicious pleasure in seeing others suffer; children have the same feeling.'[2]

Observation shows a gradual modification of human nature by which the predatory pleasure is becoming weakened. In earlier times the thirst for blood was much more controlling than at present. And indications are that it will be still further diminished; probably until it is restricted entirely to self-defence. In other parts of this work we have seen the manner in which the pleasures of aggression originate. The nervous centres originate movement outward; in this movement there is original appetitive pleasure; interference with that movement causes a shock of pain; a desire hence arises to be rid of the object which causes this pain; in the effort to remove it there is pleasure, both a new pleasure of movement and a representative pleasure of the former unimpeded movement as contrasted with the pain resulting from its hindrance. This energy in a child or savage or in a civilised being in moments of extreme passion directs itself for the removal of whatever is in the way; the child will strike and beat an inanimate object as readily as it will animate objects. Thenceforth, as the human being seeks to gratify his appetites of all sorts, and makes movements accordingly, he is constantly interfered with and as constantly exerts himself to overcome the obstacle. And as so large a portion of his activity is centred upon procuring food, in which efforts he is met by many rivals, in the search for food he meets with perhaps more interference than in seeking to gratify any other appetite. Other beings like himself are constantly in his path; hence frequent collisions occur; he comes to recognise in another human being an obstacle to his enjoyment, and an impulse arises to attack and to make away with him. In the event of victory, repose, the gratification of his hunger or thirst, are the appropriate rewards. Around the sexual appetite and interferences with its gratification is gathered a large amount of the pleasure of aggression and conflict; so also around the appetite for warmth. Interference generally with any appetite brings out the pleasure of a movement to get rid of that which interferes. That pleasure may arise when an attempt is made to inflict physical injury by blows or with weapons; in business competition, in rivalries of all sorts, or in wordy contentions. It all has its source and centre in the primary pleasures of movement in connection with their associations with the other primary pleasures—both the pleasures of movement in themselves, and as contributing to secure the other primary pleasures. The predatory pleasure—that of hurting some other being—is thus not itself a primary pleasure, though closely connected with the primary pleasures. It has its appropriate counteractive and check in the pleasures of society and sexuality, to which it is in the main antagonistic. The former is characteristic of a lower degree of mental development, and an inferior grade of civilisation; the latter of higher degrees of the same.

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[1] Hor. *Sat.* X. 96.

[2] Montaigne, *Essais* III. c 1.

§ 32. The pains of aggressive action make a very marked and potent offset to its pleasures. They are distinctively the pains of disintegration and prostration, the sufferings likely to result from combat and malevolent action generally, and have already received a sufficiently full illustration in the preceding chapter and in earlier portions of this chapter. The contrast between the pleasures and pains of conflict, turning the thought now to the one and now to the other, is well made in the familiar poem of Southey, 'The Battle of Blenheim.'

HAPPINESS OF OTHER BEINGS.

§ 33. In the preceding chapter while considering the pleasures of society we saw the manner in which the happiness of other beings about us becomes our concern. For the sake of impressing the truth I will repeat that exposition. The happiness of some of his fellow creatures is a pleasure to each man. This arises from the primary delight of society. Man desires the presence of his kind. In proportion as he causes his fellows unhappiness they will be driven from him; in proportion as he causes them happiness they will be attracted toward him. Their happiness then becomes of moment to him; and in their happiness he finds his happiness. Thus out of the primitive desire for society modified by sexuality spring the benevolent regards. First the happiness only of those in immediate proximity is considered; then as the facilities for communication are increased and larger bodies of men become interdependent, the circle of regards is widened, and we come to find happiness in the happiness of a commonwealth, a nation, and finally of all mankind. The pleasures then which come from the happiness of others and which we take in the happiness of others are still the pleasures of society with all their associations.

§ 34. The pleasures to self arising from the happiness of others are variously referred to in the following. 'Doing good is the only certainly happy action of a man's life.'[1] 'He that does good to another does good also to himself, not only in the consequence but in the very act; for the consciousness of well-doing is in itself ample reward.'[2] God has so constituted our nature that a man cannot be happy unless he is or thinks he is a means of good.'[3] 'Never did a soul do good but it came readier to do the same again with more enjoyment. Never was love or gratitude or bounty practised but with increasing joy, which made the practice still more in love with the fair act.'[4] 'The greatest pleasure I know is to do a good action by stealth and have it found out by accident.'[5] 'A beneficent person is like a fountain watering the earth and spreading fertility; it is therefore more delightful and more honourable to give than to receive.'[6] 'The true source of cheerfulness is benevolence.'[7] 'The mist arises from the earth and the fertilising showers return again into its bosom; even so the love that man sheddeth abroad upon his kind is repaid by happiness showered abundantly upon his head.'[1] 'There is one way of attaining what we may term, if not utter, at least mortal happiness; it is this—a sincere and unrelaxing activity for the happiness of others.'[2]

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[1] Sir P. Sidney. [2] Seneca. [3] Rev. Erskine Mason. [4] Shaftesbury. [5] Lamb. [6] Epicurus. [7] Parke Godwin.

The more immediate pleasurable effects of the happiness of others upon one's self are thus described:—'The Creator has connected quiet, pleasurable emotion of satisfaction with every effort that is made to promote the happiness of others. Sweet must have been the feelings of the late Earl of Aberdeen in reflecting that the treaty he negotiated gave peace to Europe for forty years, and of Sir Robert Peel in remembering that he had given untaxed bread to the toiling millions of his country; but in its degree a similar satisfaction attends every effort to promote the well-being of others. A bricklayer, we have said, might beautify his labour by reflecting that he was promoting the happiness of those who were to occupy the building. To introduce a new vegetable, to have invented a new machine, to have made a road, to have built a bridge, becomes a source of unselfish enjoyment to a rightly constituted mind. . . . If to the feeling of satisfaction which attends even the desire to do good, there is also added success in the attempt and gratitude in the recipient,—the fear of pleasure will to a loving disposition be in healthier language one fit for the gods.'[3]

In the following words are indicated the more representative pleasures resulting to one from the prosperity of many, as seen by contrast in the woes that war brings upon those remote from the scene of conflict. 'Still, however, it would be happy for mankind if the effects of national hostility terminated here, but the fact is that they who are farthest removed from its immediate desolations share largely in the calamity. They are drained of the most precious part of their population, their youth, to repair the waste made by the sword. They are drained of their wealth by the prodigious expense incurred in the equipment of fleets, and the subsistence of armies in remote parts. The accumulation of debt and taxes diminishes the public strength and depresses private industry. An augmentation in the price of the necessaries of life, inconvenient to all classes, falls with peculiar weight on the labouring poor, who must carry their industry to market every day, and therefore cannot wait for that advance of price which gradually attaches to every other article. . . . In commercial states (of which Europe principally consists), whatever interrupts their intercourse is a fatal blow to national prosperity. Such states having a mutual dependence on each other, the effects of their hostility extend far beyond the parties engaged in the contest. If there be a country highly commercial which has a decided superiority in wealth and industry, together with a fleet which enables it to protect its trade, the commerce of such a country may survive the shock, but it is at the expense of the commerce of all other nations; a painful reflection to the generous mind. Even there, the usual channels of trade being closed, it is some time before it can force a new passage for itself; previous to which an almost total stagnation takes place by which multitudes are impoverished, and thousands of the industrious poor being thrown out of employment, are plunged into wretchedness and beggary.'[1]

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[1] Anon.

[2] Bulwer Lytton.

[3] *The Culture of Pleasure*, Chap. XII. London, 1872.

Of similar purport is the following remarkable passage from the 'Wealth of Nations':—'The wealth of a neighbouring nation, however, though dangerous in war and politics, is certainly advantageous in trade. In a state of hostility it may enable our enemies to maintain fleets and armies superior to our own; but in a state of peace and commerce it must likewise enable them to exchange with us as to a greater value and to afford a better market either for the immediate produce of our own industry, or for whatever is purchased with that produce. As a rich man is likely to be a better customer to the industrious people in his neighbourhood than a poor, so is likewise a rich nation. A rich man, indeed, who is himself a manufacturer, is a very dangerous neighbour to all those who deal in the same way. All the rest of the neighbourhood, however, by far the greatest number, profit by the good market which his expense affords them. They even profit by his underselling the poorer workmen who deal in the same way with him. The manufacturers of a rich nation, in the same manner, may no doubt be very dangerous rivals to those of their neighbours. This very competition, however, is advantageous to the great body of the people, who profit greatly besides by the good market which the great expense of such a nation affords them in every other way. Private people who want to make a fortune never think of retiring to the remote and poor provinces of the country, but resort either to the capital or to some of the great commercial towns. They know that where little wealth circulates, there is a little to be got; but that where a great deal is in motion, some share of it may fall to them. The same maxims which would in this manner direct the common sense of one, or ten, or twenty individuals, should regulate the judgment of one, or ten, or twenty millions, and should make a whole nation regard the riches of its neighbours as a probable cause and occasion for itself to acquire riches. A nation that would enrich itself by foreign trade is certainly most likely to do so when its neighbours are all rich, industrious, and commercial nations.'[1]

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[1] Robt. Hall, *Reflections on War.*

REGULARITY AND HARMONY IN OUR SURROUNDINGS.

§ 35. It has been stated in more than one place in the course of this work that the movement of volition is toward pleasure and away from pain. Having experienced one pleasure, the associations of that pleasure bring it back to the mind. We remember a pleasure derived from circumstances; similar circumstances have an attraction for us, and we seek in those similar circumstances a repetition of the pleasure. As connected with the pleasurable experience, the contiguities of that pleasure are preserved in association; as leading to a similar pleasure, similar circumstances are associated. Through the operation of the laws of association and representation, by which intellectual guidance is effected and the law of volition by which effort is aimed to secure pleasure and avoid pain, the mind adapts itself to its surroundings, so as to secure the greatest amount of pleasure and the least amount of pain. If, then, there is a change in the surroundings, what is new and untried takes the place of what is known and tried, in the tentative efforts to adapt one's self to the new circumstances. Pains occur more frequently than when under the old régime it was known what course should be taken to avoid pains. New associations have to be formed, and the mind which has become accustomed to the old associations clings to them and with difficulty breaks them up. New things mean more pain; more disintegration, more prostration. A continuance of what is, a regular recurrence of events, harmony and order, mean a recurrence of the accustomed pleasures—vitality is promoted, integrity is preserved. *It hence appears that the pleasures of regularity and harmony are not themselves primary but are resolvable into the primary pleasures.* In order to preserve life there must be a certain degree of regularity in our surroundings. Regularity and harmony tend to secure not one alone but all the primary pleasures; innovation and mal-adjustment tend toward disintegration and all the primary pains. The pleasure of regularity is the pleasure of continuous and regularly-recurring pleasure; the pain of interference is the pain of disturbing pain. The pleasure we have had we desire again; and the recurrence of the circumstances of that pleasure is sought as tending to bring back the joy; what brought it before will bring it again.

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[1] Adam Smith, Part II. Bk. IV. Chap. III.

That regularity is not of itself pleasurable may be seen from the consideration that a regularly recurring pain is not any the less a pain because of its regularity, except so far as anticipation may enable us to use means of warding it off. The prisoner held bound under the continuously dropping water suffers agonies by reason of the very regularity of the drops. The sufferer from quotidian ague does not transform his dole into bliss by reason of the regular return of the chill. But from the fact that while life remains the vast majority of our regularities must be of the pleasurable kind, the notion regularity carries with it associations chiefly of pleasure. When the majority of our regularities are of pains, life is going out, and unless we can transform those pains into pleasures, they overpower us and we die. When we say we have accustomed ourselves to certain ills, we mean that we have so modified ourselves and our circumstances as to turn them into pleasures. The regular recurrence then becomes one of pleasure. This is the process of adaptation to one's environment.

There is, however, a pleasure of innovation, for without change there is no growth. This pleasure is grounded in that of movement. Indeed, there could be no pleasure of recurrence were there not a pleasure of innovation, for recurrence implies change. New things which raise vitality are desirable and are always relished; but even here we discern the force of the pleasure of regularity, since having had a new pleasure, we are eager for its repetition. We try to retain it and have it return to us. Innovations then which decidedly add to our stock of pleasures are not painful, but the reverse. *But if innovation were the sole rule* we should have nothing to depend upon; we should not know how to make efforts to secure the repetition of pleasures, everything would be chaotic, and prostration and disintegration would follow.

The pleasures of regularity in our surroundings then are all the primary pleasures as they are enhanced by an adaptation of our organisms to our environments, which adaptation has been brought about by action based upon representations of the pleasures we have experienced. We fall back upon what we know and place ourselves in such situations as to obtain the greatest amount of repetition of the pleasures we have enjoyed. Irregularity disturbs and breaks up our calculations, and prevents our availing ourselves of the knowledge we have acquired, diminishes our sources of pleasure, and lessens our prospect of gaining it in the future.

§ 36. The natural delight in regularity, and in what we are used to, is illustrated in the pleasure we take in familiar scenes, and the accustomed surroundings of home, friends, and business. We dislike strangers, we are not happy in strange places, we are at a loss in unaccustomed occupations. The greatness of the pleasures of regularity is seen in the force of habit. Our motives for doing what we have done before are greater, ordinarily speaking, than for not doing it or for doing something else.

'The force of habit will thus equal that of instinct; a faulty train of reasoning may acquire the strength of an original instinctive perception; an oft-told lie becomes a truth, and a superstition may be as hard to break asunder as the simplest and most primitive religion. Education thus vies with intuition, and habit becomes second nature.

'These habits of thought, like habits of action, when once acquired are not easily discontinued. They are like grooves in which the mind has been accustomed to slide; if well contrived and fitted, and in a right direction, they are of incalculable value. If not, they are injurious, they prevent the mind from moving in better-ordered and more truthward tracks. . . . As to habits of action, it is obvious that the great use they serve is the economy of time. What would man have accomplished by the end of his life had it been needful for him to attend to his movements in standing, walking, and using his hands and fingers? What progress would thought make, were speakers to be thinking of the sounds they utter, and to be consciously directing and adjusting their vocal apparatus? And where would be the literature of the world, were the mind compelled to pass from its sublime contemplations to the muscular actions which guide the movements of the pen? . . . . But while habit, as we have seen, is so useful in abridging labour, in economising time, in preserving order and method and coherence in our thoughts, and in making the practice of virtue and religion easier to us, still it imposes upon us no inevitable compulsion. It is not the blind necessity of an instinct. It is our own fault if we are enslaved instead of being merely assisted by habit. Human agency ought to be able to assert its freedom in this as in every other department of thought and action. The habit should be like a steed, so well broken, that though the will may have thrown the reins on its neck while otherwise occupied, it can in a moment gather them up and come to a sudden halt.'[1]

To the power of custom in general, Bacon's essay (XXXIX.) bears witness: 'Men's thoughts are much according to their inclination; their discourse and speeches according to their learning and infused opinions; but their deeds are often as they have been accustomed; and therefore, as Machiavel well noteth (though in an ill-favoured instance) there is no trusting to the force of nature, nor to the bravery of words, except it be corroborate by custom. . . . The predominancy of custom is everywhere visible, insomuch as a man would wonder to hear men profess, protest, engage, give great words, and then do just as they have done before, as if they were dead images and engines, moved only by the wheels of custom. . . . Many examples may be put of the force of custom, both upon mind and body; therefore since custom is the principal magistrate of man's life, let men by all means endeavour to obtain good customs. Certainly custom is most perfect when it beginneth in young years: this we call education, which is in effect but an early custom. So we see, in languages, the tongue is more pliant to all expressions and sounds, the joints are more supple to all feats of activity and motions in youth, than afterwards; for it is true that late learners cannot so well take the ply except it be in some minds that have not suffered themselves to fix, but have kept themselves open and prepared to receive continual amendment, which is exceeding rare. But if the force of custom simple and aggregate be great, the force of custom copulate and conjoined and collegiate is far greater; for there example teacheth, company comforteth, emulation quickeneth, glory raiseth: so as in such places the force of custom is his exaltation.'

The value of that which is established is seen by a consideration of the evils which follow innovation. Burke's 'Reflections on the Revolution in France' will furnish us with an excellent example.

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[1] Symonds, *On Habit*. London, 1871, p. 319 et seq.

§ 37. Among the pains of regularity are those we commonly indicate by the term monotony:

'Too much rest is rust.
There's ever cheer in changing.'[1]

'How dull it is to pause, to make an end,
To rust unburnished, not to shine in use!
As tho' to breathe were life, life piled on life
Were all too little, and of one to me
Little remains: but every hour is saved
From that eternal silence, something more,
A bringer of new things; and vile it were
For some three suns to store and hoard myself,
And this gray spirit yearning in desire
To follow knowledge like a sinking star,
Beyond the utmost bound of human thought.'[2]

I will now refer by the following passage to the evils of custom considered generally: 'The despotism of custom is everywhere the standing hindrance to human advancement, being in unceasing antagonism to that disposition to aim at something better than customary which is called, according to circumstances, the spirit of liberty or that of progressive improvement. The spirit of improvement is not always a spirit of liberty, for it may aim at forcing improvements on an unwilling people; and the spirit of liberty in so far as it resists such attempts, may ally itself locally and temporarily with the opponents of improvements; but the only unfailing and permanent source of improvement is liberty, since by it there are as many possible independent centres of improvement as there are individuals. The progressive principle however, in either shape, whether as the love of liberty or of improvement, is antagonistic to the sway of custom, involving at least emancipation from that yoke; and the contest between the two constitutes the chief interest of the history of mankind. The greater part of the world has, properly speaking, no history, because the despotism of custom is complete. This is the case over the whole East. Custom is there in all things the final appeal; justice and right mean conformity to custom; the argument of custom, no one, unless some tyrant intoxicated with power, thinks of resisting. And we see the result. Those nations must once have had originality; they did not start out of the ground populous, lettered, and versed in many of the arts of life; they made themselves all this, and were then the greatest and most powerful nations in the world. What are they now? The subjects or dependents of tribes whose forefathers wandered in the forests when theirs had magnificent palaces and gorgeous temples, but over whom custom exercised only a divided rule with liberty and progress. A people, it appears, may be progressive for a certain length of time, and then stop: when does it stop? When it ceases to possess individuality.'[1]

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[1] Old song.

[2] Tennyson, *Ulysses*.

§ 38. Without entering upon a more extended illustration of the pains of regularity, many of which have already received exemplification in earlier portions of this chapter and in the former one, we will bring to a close our study of this subdivision, and with it the present chapter, with a quotation from Bulwer's 'Caxtoniana,' which will serve the purpose of a summing up.

'As the body for health needs regularity in habits and will even reconcile itself to habits not in themselves best fitted for longevity with less injury to the system than might result from abrupt changes to the training by which athletes attain their vigour, so the mind for health needs a certain clockwork of routine; we like to look forward with a tranquil sentiment of security; when we pause from the occupation of to-day, which custom has made dear to us, there is a charm in the mechanical confidence with which we think that the same occupation will be renewed at the same hour to-morrow. And thus monotony itself is a cause and element of happiness which, amid the shifting tumults of the world we are apt to ignore. . . . As the pleasure the ear finds in rhyme is said to arise from its recurrence at measured periods, from the gratified expectation that at certain intervals certain effects will be repeated—so it is in life: the recurrence of things same or similar, the content in the fulfilment of expectations so familiar and so gentle that we are scarcely conscious that they were formed, have a harmony and a charm, and where life is enriched by no loftier genius, often make the only difference between its poetry and its prose.'

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[1] J. S. Mill, *On Liberty*.

CHAPTER LXII.

TERTIARY PLEASURES AND PAINS.

§ 1. THE expositions in the preceding chapters have been sufficiently full to render unnecessary any general discussion of the subject of this chapter. We will therefore proceed at once with the delineation of certain special groups.

LIFE—DEATH.

§ 2. *The pleasures of life* may be a general term to include all our pleasures. Everything pleasurable in our experience may be embraced under this title. Life means living, experiencing; all the pleasures we have then are the pleasures of life. But the pleasures of life are considered chiefly when we contrast them with the pains of death. It is in the apprehension of the loss of pleasures which we have known that we come to value most especially the pleasures of life. Noting, therefore, that these pleasures are all pleasures held together under a general notion, we place beside this the further fact that as constituting some of the pleasures of life, we add the absence of the pains of death. And by an examination of the pains of death we shall best understand the pleasures of the opposite state.

§ 3. A large group of the pains of death is that which contains the pains of disintegration of the body and prostration. It needs no argument to make evident the fact that those pains are associated with the idea of death. A re-examination of the sections devoted to the subjects of disintegration and prostration, in Chapter LX., will be of advantage to the reader in this connection.

A distinction must be drawn between the pains of death which relate primarily to the Ego when dead, and those which have reference to the unpleasant surroundings of death as they appear in the community or the world generally. The ideas of darkness and cold which are represented when we think of death do not arise from the notion that we when dead shall be cold or in darkness, but that in dying those pains represented by cold and darkness will come upon us; from the circumstance that the dying person whom we have seen, and the corpse, are cold and clammy;

that the abodes of the dead, vaults, churchyards, and tombs are cold and cheerless. Probably, too, the use of dark colours as symbols of mourning greatly increases this effect. So also we do not fear the pains of disintegration after we are dead, but only dread them as appertaining to the act of dying. The pain is that of disintegration and prostration which we associate with death. The sorrow is that of the 'valley of the shadow of death.'

§ 4. Indeed, all the primary pains are involved in the ideas of death. We have already seen how inextricably involved they are with one another; how we cannot have one without the associations of all the others. If then we find the pains of death include the pains of disintegration and prostration, we are warranted in saying that they comprise all the primary pains. In truth, the notions of pain in general and death are closely allied. So far forth as a man is in pain he is dying. We have in this consideration another corroboration of the theory which connects pain with loss and absence of vitality, and pleasure with its presence and increase.

§ 5. Next to the ideas of pain as resulting from disintegration we will notice those of pain as resulting from the loss of familiar associations, from innovation, and mal-adjustment in highly representative degrees. The following extracts will illustrate.

'When I die, I must depart not only from sensual delights, but from the more manly pleasures of my studies, knowledge, and converse with many wise and godly men, and from all my pleasure in reading, hearing, public and private exercises of religion, etc. I must leave my library and turn over those pleasant books no more; I must no more come among the living nor see the faces of my faithful friends, nor be seen of man; houses and cities and fields and countries, gardens and walks, will be nothing as to me. I shall no more hear of the affairs of the world, of man, or wars, or other news, nor see what becomes of that beloved interest of wisdom, piety, and peace which I desire may prosper,' etc.[1]

'The glories of our birth and state
  Are shadows, not substantial things;
There is no armour against fate—
  Death lays his icy hands on kings;
Sceptre and crown
Must tumble down,
And in the dust be equal made
With the poor crooked scythe and spade.'[2]

§ 6. Another variety of this same collection of pains appears in considerations of the defeat and blight of expectations formed. This is nothing other than a representative pain of mal-adjustment. The nature of expectation has been set forth in another place. There its representative character was sufficiently elucidated. The thought then of having one's expectations defeated is a representative pain of the disseverance of closely cemented associations. This is illustrated well in a lament of Henry Kirke White.

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[1] Richard Baxter, *Dying Thoughts*.

[2] James Shirley.

> 'Yet do I feel my soul recoil within me
> As I contemplate the dim gulf of death,
> The shuddering void, the awful blank—futurity.
> Ay, I had planned full many a sanguine scheme
> Of earthly happiness—romantic schemes,
> And fraught with loveliness; and it is hard
> To feel the hand of death arrest one's steps,
> Throw a chill blight o'er all one's budding hopes,
> And hurl one's soul untimely to the shades,
> Lost in the gaping gulf of blank oblivion.'

§ 7. We are hence enabled to see, without more ample illustration, that the pains of death fall into two large sections, the one pains of disintegration and prostration, the other of mal-adjustment and innovation. The former are primary pains. The latter were examined near the close of the preceding chapter, and were there found to furnish no original pains, but only representations of pains experienced. We thus are brought to the conclusion that the pains of death are no other than the primary pains we have already examined. And also we are enabled to say that unless the following sections of this chapter reveal some new pleasures, that the pleasures of life may all be resolved into the primary pleasures.

§ 8. There is another prominent class of pains associated with death, which I do not now speak of, for the reason that they will form the subject of a future subdivision. I refer to those pains which may be supposed to befall the individual in a future life,—the pains of hell. These will include both those pains which are believed to be known and the further pains of uncertainty as to the future, the latter of which are no other than pains of mal-adjustment and irregularity.

§ 9. Still another aspect in which the pains of death may be regarded is that of the death of others, as affecting our interests, those of the community, or of the nation. In this view, the pains of death resolve themselves into pains of the loss of familiar society or of loss of accustomed pleasures. The friends whom we love are gone; the advantages they brought to us are partially or wholly lost; the benefits which a prominent man has conferred upon the state are abrogated; perhaps our personal security and that of friends are impaired, or our property threatened, or our bread taken away. But in such a case and under such a method of viewing death's evils we discover nothing more than repetitions and representations of primary pains.

§ 10. In concluding this exposition of the pains of death, I cannot forbear quoting from Luis De Granada a passage which is an excellent portrayal within a small compass of all the prominent sorrows which the name *death* suggests.

'O death, how bitter is the thought of thee! how speedy thy approach! how stealthy thy steps! how uncertain thy hour! how universal thy sway! The powerful cannot escape thee; the wise know not how to avoid thee; the strong have no strength to oppose thee; there is no one rich for thee, since none can buy life with treasures. Everywhere thou goest, every place thou besettest; in every spot thou art found. All things have their waxing and waning, but thou remainest ever the same. Thou art a hammer that always strikes, a sword that is never blunt, a net into which all fall, a poison into which all enter, a sea on which all must venture, a penalty which all must suffer, and a tribute which all must pay. O cruel death! thou carriest off in an hour, in a moment, that which has been acquired with the labour of many years; thou cuttest short the successions of the high-born; thou leavest kingdoms without heirs, thou fillest the world with orphans; thou cuttest short the thread of studies; makest of no use the noblest genius; joinest the end to the beginning without allowing any intermediate space. O death, death! O implacable enemy of the human race; why hast thou entered the world?'

Death is represented as an enemy sure to come, but the time of whose coming is uncertain and who is wholly irresistible—universally powerful. The idea is brought out of death as being an evil to the individual, and also a general, universal evil. In the notion of death as a pursuing, stealthy, speedy, bitter invincible enemy, we have the pains of disintegration and prostration. So also, and in addition, the pains of restraint of movement in the figures by which death is termed a hammer, a sword, a net, a prison. In the metaphor of a sea to be ventured upon the pain of uncertainty is exhibited; in a tribute we consider the pain of loss of property, which resolves itself into loss of the means of subsistence and thus into the pains of want of food. The idea of a penalty is either primarily a fine or imprisonment, or perhaps stripes or some other bodily infliction. In the latter part of the passage we have depicted all the more representative ills of which I have spoken—breaking of familiar associations, defeat and annihilation of expectations; and these two both in their individual and representative aspects.

§ 11. Aside from the positive ills and the disappointments of life which all expect, and which all bear, there are frequently pains so great, so overwhelming, that the desire to live ceases and life itself is a burden. When contrasted with death it is felt that 'to die is gain.' There are then some pleasures connected with the idea of death. Subjectively considered, chief among these is the idea of rest. 'Where the wicked cease from troubling and the weary are at rest.'

'So he lived long 'mid honours, feasts, and gear;
But age came on, and anguish and disease.
Man ever thinks in bargaining with Zeus
To cheat, and ever fails.

And weary, weary seemed the languid days,
Joyless the feast, and glitterless the gold,
Till, racked with pain, one night on Death he called,
And passed with Death away.' [1]

§ 12. Still further, among the pleasures of death are to be considered the joys of an expected future state.

'Who would live alway away from his God—
Away from yon heaven, that blissful abode,
Where rivers of pleasure flow bright o'er the plains,
And the noontide of glory eternally reigns?' [2]

But these we will examine farther on.

§ 13. Looking at the matter objectively, so far as death terminates pains and evils it is a good.

§ 14. As a result of our examination, therefore, it appears that the pleasures of living and life are the primary pleasures, presentative and representative, and no other, so far as we have yet seen. Equally is it true that the pains of dying and death are the primary pains, presentative and representative, though we reserved for subsequent study the pleasures and pains of a future existence. So far as death is concerned, subjectively considered, and irrespective of a future life, it does not seem that any one has any reason to covet, or to fear, or dread the state itself, its imputed pains relating wholly to the present life. If death be a sleep which knows no waking, the loss is no greater than the gain. If there be a life beyond the grave, to which death is only an introduction, death will be an evil or a good according to the character and nature of that life. But if there be a future life, we shall no longer be dead but living. The terms pleasure and pain have no relevancy to the state we call death; in fact, it can readily be made to appear in reflection that we have no conception whatever of such a state. Pleasures and pains relate wholly to life, and can have no pertinence to a state wherein there is supposedly no consciousness at all.

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[1] Bulwer Lytton, *Death and Sisyphus.*

[2] Muhlenberg.

Objectively considered, the advantages of life about us are those of good society, and (more representatively expressed) of customary experience; the pains of death are the loss of accustomed associations. The disadvantages of the life of others are those of bad society, and the benefits death confers are in removing ill-adjusted connections. These evils and these goods have elsewhere all been resolved into primary pleasures and pains.

KNOWLEDGE—IGNORANCE.

§ 15. In another place in this work, knowledge has been considered as a product of cognition; and the products of cognition have been shown to be themselves representative cognitions. Therefore, the pleasures which accompany knowledge are the pleasures which accompany representative cognitions, that is, they are representative pleasures. They hence relate back to presentative pleasures, and are resolvable into them. Thus the pleasures of knowledge, upon this line of argument, are found to be based upon, and drawn out from primary pleasures.

§ 16. Knowledge is greater or less, according to its representativeness and complexity. Ignorance is a correlative term indicating a less degree of knowledge. It is a term varying greatly in its applications. What is at one time and compared with one standard ignorance, at another and measured by another rule, becomes knowledge. Everybody has some degree of knowledge; no one is wholly ignorant, unless he be an idiot. The pains of ignorance are hence negative, so far forth as they are to be regarded as pains of ignorance. They are pains which a higher degree of knowledge would have avoided. But this statement enables us to perceive the important truth that therefore the pains of ignorance are really pains of knowledge. For it is a greater knowledge, coming perhaps too late, that enables us to see the value of that which others possess, and which we have not. Hence the pains of ignorance are pains attending upon representative cognitions. Equally so, if the pains are pains which I feel in witnessing the ignorance of others. I apprehend evils to come to me from their ignorance, or I sympathise with what I conceive to be their unfortunate condition. The pain accompanies representative cognitions, carrying the mind back to presentative experiences, both of cognition and feeling. Hence analysis of the pains of ignorance again brings us to the primary pleasures and pains.

§ 17. In the first place we may observe the value of knowledge in the practical concerns of life. 'One great use of knowledge is the preservation of health. This, although greatly overlooked in established systems of education, is of paramount importance. Life depends on it, and also the power of exercising with effect all the mental functions. There are two modes of instructing an individual in the preservation of health; the one by informing him as a matter of fact, concerning the conditions on which it depends, and admonishing him by way of precept to observe them,—the other by expanding to his intellect the constitution of his bodily frame, and teaching him the uses of its various parts, the abuses of them, the relations established between them and external objects such as food, air, water, heat and cold, and the consequences of observance or neglect of these relations.'[1]

In that large section of the pleasures that knowledge brings which relates to health and the preservation of the body, with all its connected advantages, our previous analyses have made plain the fact that this division is grounded on the primary pleasures and is directly referrible to them.

§ 18. Another very important use of knowledge is its application to secure a competence. 'We need not insist on the value of that knowledge which aids indirect self-preservation by facilitating the gaining of a livelihood. This is admitted by all; and indeed by the mass is perhaps too exclusively regarded as the end of education.'[2] 'The philosophy which affects to teach us a contempt of money does not run very deep; for, indeed, it ought to be still more clear to the philosopher than it is to the ordinary man, that there are few things of greater importance. And so manifold are the bearings of money upon the lives and character of mankind that an insight which would search out the life of a man in his pecuniary relations would penetrate into almost every cranny of his nature. He who knows, like St. Paul, both how to spare and to abound, has a great knowledge; for if we take account of all the virtues with which money is mixed up—honesty, justice, generosity, charity, frugality, forethought, self-sacrifice, and of their correlative vices, it is a knowledge which goes near to cover the length and breadth of humanity; and a right measure and manner in getting, saving, spending, taking, lending, borrowing, giving, and bequeathing, would almost argue a perfect man.'[1]

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[1] Combe, *Lectures on Education.*

[2] H. Spencer, *Education.*

§ 19. The object of securing a competence is most characteristically the obtaining of subsistence—enough to eat and drink. Allied to this is the pleasure of repose, expressed by the word ease and its fellows; the enjoyments of society to some extent; and all the joys of health—but no new pleasures.

The advantages of knowledge as bearing upon self-preservation and upon the question of subsistence are emphasised in the following passage from Combe.[2] 'Man cannot arrest the sun in its course so as to avert the wintry storms and cause perpetual spring to bloom around him; but by the proper exercise of his intelligence and corporal energies, he is able to foresee the approach of bleak skies and rude winds, and to place himself in safety from their injurious effects. These powers of controlling nature and of accommodating his conduct to its course are the direct results of his rational faculties; and in proportion to their cultivation is his sway extended. Man, while ignorant, is in a helpless condition. But let him put forth his proper human capacities and he will then find himself invested with the power to rear, to build, to fabricate, and to store up provisions; and by availing himself of these resources and accommodating his conduct to the course of nature's laws, he will be able to smile in safety beside the cheerful hearth, when the elements maintain their fiercest war abroad.'

We here notice pleasures of alimentation, movement and exercise, heat, vitality, integrity, repose.

§ 20. Following still further the last quotation we find a new group of the utilities of knowledge :—

'We are surrounded by countless beings, inferior and equal to ourselves, whose qualities yield us the greatest happiness, or bring upon us the bitterest evil, according as we affect them agreeably or disagreeably by our conduct. To draw forth all their excellencies and cause them to diffuse joy around us, to avoid touching the harsher springs of their constitution, and exciting painful discord around us, it is indispensably necessary that we should know the nature of our fellows, and act with an habitual regard to the relations established by the Creator between them and ourselves.' Obviously we have here the pleasures of society. Another cluster of pleasures of the same sort is thus indicated in the same work. 'Language, however, is not to be depreciated or despised. Man is obviously formed to live in society; his happiness is vastly increased by co-operation and interchange of his ideas with his fellows; and language, oral and written, is his natural medium of communication. It is of first-rate importance to every individual, therefore, to possess not only words for all his ideas and emotions, but such expertness in using them in speech and writing as may enable him readily and successfully to convey to other minds the precise impressions existing in his own.'

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[1] Taylor, *Notes from Life*.

[2] *Lectures on Education*.

And likewise the same cluster viewed in another aspect in the following:—

'And seeing every nation affords not experience and tradition enough for all kind of learning, therefore we are chiefly taught the languages of those people who have at any time been most industrious after wisdom; so that language is but the instrument conveying to us things useful to be known.' [1]

§ 21. The pleasures of society as exhibited in a good government and a stable political condition are obtained in a higher degree by increased knowledge. 'Again, there is no one, even of those who are not profound politicians, who is not aware that we have rulers; and is it not proper that he should understand that government is necessary to preserve our lives and property? Is he likely to be a worse subject for knowing that? That depends very much on the kind of government you wish to establish. If you wish to establish an unjust and despotic government . . . . then it would be advisable to avoid the danger of enlightening the people. But if you wish to maintain a good government, the more people understand the advantages of such a government, the more they will respect it.' [2]

§ 22. There is no little pleasure in the acquisition of knowledge or in study. A portion of this pleasure is doubtless the prospect of the good things which knowledge may be supposed to bring; but there seems to be in addition a delight in the work itself. This is the pleasure of activity, having its root in the primitive pleasure of movement and exercise. In other chapters we have seen that there are two elements in the pleasure of activity, one the more original enjoyments of movement in itself, and the other the advantages which movement brings. These advantages are the various pleasures which are objects of action. In the succeeding paragraph Alison refers to both these sources of pleasure.

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[1] Milton, *Tractate on Education.*

[2] Whately, *Annotations on Bacon's Essay 'Of Studies.'*

'In every period of life the acquisition of knowledge is one of the most pleasing employments of the human mind. But in youth there are circumstances which make it productive of higher enjoyment. It is then that everything has the charm of novelty; that curiosity and fancy are awake; and that the heart swells with the anticipations of future eminence and utility. Even in those lower branches of instruction which we call mere accomplishments, there is something always pleasing to the young in their acquisition. They seem to become every well educated person; they adorn if they do not dignify humanity; and what is far more, while they give an elegant employment to the hours of leisure and relaxation, they afford a means of contributing to the purity and innocence of domestic life.'

§ 23. By the above remarks we are led up to the consideration of a question which we cannot pass by us, as without answering it, no study of knowledge-pleasures would be complete. It will perhaps seem evident, after what has gone before, that those pleasures of knowledge which arise from its utilities are derivative pleasures; but it will be asked, what are the pleasures of knowledge in itself? There is, it may be urged, a pleasure in knowledge; not for what it will bring us, but for what it is. To know, to possess a wide range of intellectual culture, is desirable for itself; it is ornamental, it is beautiful to have knowledge. When people speak in this way of the enjoyments of knowledge they may mean the delights of acquiring knowledge or of possessing knowledge; very frequently they mean both. Now so far forth as they intend the former, they are speaking of the pleasures of pursuit, and those are resolvable into pleasures of movement and exercise, and into pleasures which are to be gained in securing the object of pursuit; and the latter merge in the pleasures of possessing knowledge. The pleasures of possessing knowledge are nothing but the advantages which that possession brings. There is no pleasure in knowing that we have knowledge, save we represent to ourselves pleasures that knowing some particular thing has given us; and we cannot think of knowing any particular thing, the knowledge of which is not connected with and derived from some of the primary pleasures and pains. Even in those things which seem to have the least practical utility, we at any rate can observe how powerful is the influence of the love of society; by fitting ourselves as others about us, we are able to cultivate and secure their companionship.

That there is no original pleasure of knowledge in itself is still further seen when we again reflect that this pleasure, if there be one, must be pleasure connected with a representative cognition; hence representative pleasure. On tracing it back to its foundations we find presentative cognitions and presentative and primary feelings.

The delusion in regard to a pleasure of knowledge in itself as apart from the utilities of knowledge has arisen, as have so many kindred delusions, from an imperfect analysis of knowledge, men failing to perceive its representative character and to observe that with each representative cognition there is representative feeling. When the mind acquires an item of information as a result of study, it feels the glow of satisfaction which a pursuer feels who has captured his prey; and when he reviews his learning and takes pride in its possession, there comes a massive feeling of pleasure, which is a conglomerate of all the past feelings of pleasure which have arisen in his experience in connection with the things he recalls as a part of his intellectual acquisitions. There is, indeed, a pleasure in acquiring and in possessing knowledge, which arises without immediate conscious thought of utilities, but it is still representative and derivative in its origin.

§ 24. It will not require argument to show that the pleasures of society are at the foundation of the general advantages of the diffusion of knowledge. We have been remarking some of the advantages of the individual's knowledge to himself; in the general advancement of learning, we are called upon to observe as well the advantages which other people's knowledge brings to each individual. The following will serve as an illustration of these advantages. 'The concurrent testimony of the ablest and most experienced educators of our own and other lands affords the most conclusive assurances that under a well-administered and efficient system of universal education, *ninety-nine out of every hundred* even of the generation first submitted to the experiment may be rendered honest dealers, conscientious jurors, true witnesses, incorruptible voters or magistrates, good parents, good neighbours, good members of society, temperate, industrious, and frugal, conscientious in all their dealings, prompt to pity and instruct ignorance, public-spirited, philanthropic, and observers of all things sacred.'[1]

§ 25. In a word, the pleasures of the diffusion of knowledge are the enhancement of the utilities which subsist to each man from the association and intercourse of his fellows. No new pleasures are here presented. Many of them are marked in the preceding extract by referring to the absence of their correlative pains.

§ 26. That highly generalised knowledge which we ordinarily term *Science* has its pleasures thus admirably set forth – they are of course conspicuously representative. 'Thus to the question with which we set out— What knowledge is of most worth ?—the uniform reply is Science. This is the verdict on all the counts. For direct self-preservation, or the maintenance of life and health, the all-important knowledge is Science. For that indirect self-preservation which we call gaining a livelihood, the knowledge of greatest value is Science. For the due discharge of parental functions, the proper guidance is to be found only in Science. For that interpretation of national life, past and present, without which the citizen cannot rightly regulate his conduct, the indispensable key is Science. Alike for the most perfect production and highest enjoyment of art in all its forms, the needful preparation is still Science. And for purposes of discipline—intellectual, moral, religious—the most efficient study is, once more, Science. . . . . Necessary and eternal as are its truths, all science concerns all mankind for all time. Equally at present and in the remotest future, must it be of incalculable importance for the regulation of their conduct, that men should understand the science of life physical, mental, and social, and that they should understand all the sciences as a key to the science of life.'[2]

Pleasures of integrity and vitality, of alimentation, of sexuality, and of society, those representative pleasures which we call æsthetic, those which derive their value from the advantages and the pleasure of acquiring knowledge, are the pleasures which science gives, and these pleasures we have more than once traced back to basic presentative pleasures.

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[1] S. S. Randall, *Popular Education*. N. Y., 1869.

[2] H. Spencer, *Education*.

The ways in which the pleasures which appertain to knowledge may be described and marked are infinite. We cannot hope to refer to more than a very few. Those which have been spoken of constitute the most prominent groups, and will have to suffice for present illustration.

§ 27. Having exemplified the pleasures of knowledge, there is no need of spending time upon the pains of ignorance. They have already been indicated. They are the pains which occur when knowledge is absent, and are largely the negation of the pleasures which knowledge brings, this negation also implying the corresponding pain. By means of ignorance, disease and injury to the health are brought about; by ignorance, poverty and starvation arise; by ignorance, the social pleasures are abridged and impaired. Perhaps these three are the most prominent of the ills occasioned by want of knowledge. The ignorant man suffers in health, he fails to gain a competence, and his ignorance excludes him from much of the advantage which the society of the more educated and higher classes of his fellows is sure to furnish.

§ 28. That knowledge too has its pains must not escape our notice. The effect on health of too intense or injudicious study has its place here. 'It is impossible for any man to be a student without endangering the health. Man was made to be active. The hunter who roams through the forest, or climbs the rocks of the Alps, is the man who is hardy and in the most perfect health. The sailor who has been rocked by a thousand storms, and who labours day and night, is a hardy man unless dissipation has broken his constitution. Any man of active habits is likely to enjoy good health if he does not too frequently over-exert himself. But the student's habits are all unnatural; and by them nature is continually cramped and restrained. . . . . It is frequently the case that the student, as the fields of knowledge open before him in all their boundless extent, feeling strong in the buoyancy and elasticity of youth, and knowing that his character must all depend upon himself, sits down closely to his books, resolved to stop for nothing till his scholarship is fair and high. The first, the second, the third admonitions in regard to his health are unheeded, till at last he can study no longer, and then, too late, he discovers that the seeds of death are planted in him.'[1]

§ 29. Another difficulty of learning is that it tends to withdraw one from society and its pleasures; and unfits one for society. 'We have known many fine geniuses with that imperfection that they cannot do anything useful,' not so much as write one clean sentence. 'Tis worse, and tragic, that no man is fit for society who has fine traits. At a distance he is admired; but bring him hand to hand he is a cripple. One protects himself by solitude, and one by courtesy, and one by an acid worldly manner, each concealing how he can the thinness of his skin and his incapacity for strict association. But there is no remedy that can reach the heart of the disease, but either habits of self-reliance that go in practice to making the man independent of the human race, or else a religion of love. Now he hardly seems entitled to marry; for how can he protect a woman, who cannot protect himself?

'We pray to be conventional. But the wary heaven takes care that you shall not be, if there is anything good in you. Dante was very bad company, and was never invited to dinner.

'Michael Angelo had a sad sour time of it. The ministers of beauty are rarely beautiful in coaches and saloons. Columbus discovered no isle or key so lonely as himself. Yet each of these potentates saw well the reason of his exclusion. Solitary was he? Why, yes, but his society was limited only by the amount of brain nature appropriated in that age to carry on the government of the world. "If I stay," said Dante, when there was question of going to Rome, "who will go? And if I go, who will stay?"'[2]

§ 30. Besides the ill effects upon health, the various pains connected with the social state are the most prominent evils associated with knowledge. Both in the acquisition and the possession of knowledge there are infelicities which relate primarily to society. One class of these comprises the perils of superiority coming from the envy and jealousy of one's fellows:—

'Greatness has its cankers, worms, and moths;
Bred out of too much humour in the things
Which after they consume; transferring quite
The substance of their makers into themselves.'[3]

'As cedars beaten with continual storms,
So great men flourish.'[4]

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[1] Todd, *Student's Manual*, Chap. VIII.

[2] Emerson, *Society and Solitude*.

[3] Jonson, *Sejanus*.

[4] Chapman.

Another class of these evils are those called to mind by the words self-conceit, egotism, and selfishness. 'Knowledge puffeth up.' Those who are engrossed with their own knowledge are often apt to be exclusive and selfish. They thus lose the kindly feelings of their fellows and are deprived of many of the social benefits.

§ 31. Conversely, as knowledge has its pains, so ignorance has its pleasures. The presence of a better health, the avoidance of many anxious cares and much social envy, occur at once in view of what has been said in the last section. Wherever anything makes knowledge of any sort undesirable, the same thing makes ignorance desirable.

The result of our exposition thus far is that pleasures of knowledge are complex pleasures resolvable into primary pleasures, and containing nothing not found in those pleasures and representations of them; that similarly the pains of ignorance, as they are called, have a parentage in and are traceable back to the primary pains.

POWER—IMPOTENCE.

§ 32. The designation *power* embraces a great variety of pleasures and pains, the former predominating. By power in general we mean ability to do something, and in speaking of the pleasures of power we mean generally the ability to do something more than the majority of men are able to do, that is the pleasures of great power or 'of great place.' From this definition of power it is evident that the pleasures of exercise and movement lie at the foundation of them, since the pleasure of doing is a pleasure of movement, and the pleasure of ability to do is only pleasure of doing combined with knowledge that one can do, which latter is but representation of the pleasure of doing, with its attendant circumstances.

§ 33. The applications of the word *power* are numberless. Under physical power we can include everything that comes under health, with the additional notion of uncommon physical strength; under mental power much that appertains to knowledge—knowledge is power; under great place and preferment, much that is characteristic of society. Generally, the pleasure of power is that of possessing an ability to overcome resistances. The onward flow of spontaneous movement is the incipiency of the joy of power. When resistances have been experienced and overcome, representations of those experiences and of the success in overslaughing the opposition, give us the fulness of the pleasure. Its extent varies according to the different circumstances.

§ 34. The following is expressive of the general strength of the love of power.

> 'O sacred hunger of ambitious mindes,
> And impotent desire of men to raine!
> Who neither dread of God, that Devils bindes,
> Nor lawes of men, that common weales containe,
> Nor bands of nature that wilde beasts restraine,
> Can keep from outrage and from doing wrong
> Where they may hope a kingdom to obtain,
> No faith so firm, no trust can be so strong,
> No love so lasting then that may enduren long.'[1]

An excellent collection of the associated pleasures of power, showing what goes to make up the general delight which is so transcendent, may be found in Prior's 'Solomon.'

The pleasure of power is not an independent pleasure, but the pleasure of unlimited ability to get those pleasures which we have learned to value most. Attendant upon that pleasure are also all the altruistic pleasures. The happiness of benevolence and conferring blessings upon others is a great element often in the joy of power. Illustration of this latter is found in Shelley's 'Prometheus Unbound.'

These two poems illustrate two grand classes of the pleasures of power. The first consists of representative egoistic pleasures chiefly—the gratifications which power enables one to secure having reference primarily to self. Increased facilities for feasting, obtaining clothing and rich and costly dwellings, together with all the accompaniments of a luxurious life, the pleasures of society and sex included. All the pleasures which have been thus depicted have been already reduced in more than one place to the primary pleasures. In the other grand class, pleasures considered as affecting the one who bestows good things upon others, we have altruistic enjoyments whose foundation we have heretofore seen to be the pleasure of society.

§ 35. The pleasure we take in the power of some one else is founded in the social pleasure. The benefits, protection, aid, we receive from another more powerful than ourselves make us take comfort in his greater ability. We like to have others about us happy, and our pleasure is increased if we are finding our own enjoyments and capacities for enjoyment materially enhanced thereby. Of the same sort is the pride and pleasure we take in the power of a king or a government. We think of the blessings conferred or likely to be conferred on us and those dear to us.

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[1] Spenser's *Faerie Queene.*

> 'An isle the seat
> Of power and plenty; her imperial throne
> For justice and for mercy sought and known,
> Virtues sublime, great attributes of heaven,
> From thence to this distinguished nation given.
> Yet farther west the western isle extends
> Her happier fame; her armed fleet she sends
> To climates folded yet from human eye,
> And lands which we imagine wave and sky.
> From pole to pole she hears her acts resound,
> And rules an empire by no ocean bound.'[1]

> 'God prosper long our noble king,
> Our lives and safeties all.'[2]

§ 36. The satisfaction that exists in the control of other men arises both from the removal of hindrances existing to prevent one doing his will and from an extension of one's field of operation. Men ordinarily limit and check one another. When, therefore, one man attains a commanding position over others, he both removes this natural limitation and positively adds to his capacity to do. Things which he could not do alone he does through the agency of others. He is pleased at his enlarged ability to have the things and do the acts that give him pleasure. The social pleasure has of course much influence also.

§ 37. A variety of power is expressed by *skill*; ability and perfection in some art or employment giving one a wider range for the exercise of one's will.

Similarly, another variety is that expressed by *knowledge*, greater intelligence removing many hindrances and increasing one's field of action. 'Knowledge and good parts, managed by grace, are like the rod in Moses's hand, wonder-workers.'[3]

§ 38. Considering the individual alone, the pleasures of liberty are essentially the same as those of power. *Liberty*, however, refers more especially to the removal of outside restrictions; *power* to an ability superior to and transcending obstacles. Taking into account commonwealths and states, the ideas of power and liberty, with their associations, are often diametrically opposed—the advantages of the ascendency of one or a few individuals are subversive of the advantages which the liberty of all affords.

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[1] Prior, *Solomon*. [2] *Chevy Chase*. [3] Arrowsmith.

§ 39. The curious fact should be noticed (curious, though not without its parallel in point of remarkableness among the facts of pleasures and pains), that the pains which are commonly ascribed to power are really pains of impotence. The powerful in their eminent position are more hampered, restricted, and prevented from doing their will, than are those in less conspicuous and elevated positions. If they do what they like they offend and expose themselves to obloquy and attack, sometimes to ruin and death.

> 'What is a king? A man condemned to bear
> The public burthen of the nation's care;
> Now crowned some angry faction to appease,
> Now falls a victim to the people's ease.
> From the first blooming of his ill-taught youth,
> Nourish'd in flattery and estranged from truth,
> At home surrounded by a servile crowd,
> Prompt to abuse, and in detraction loud;
> Abroad begirt with men, and swords, and spears,
> His very state acknowledging his fears;
> Marching amidst a thousand guards, he shows
> His secret terror of a thousand foes;
> In war, however prudent, great, or brave,
> To blind events and fickle chance a slave;
> Seeking to settle what for ever flies,
> Sure of the toil, uncertain of the prize.'[1]

Here too nearly all the pains which distress human life may be brought in by way of association. The powerful obtain more luxuries, are pampered, are more gluttonous and bibulous; hence alimentary evils attach themselves. They are apt to indulge to excess all the appetites, for the reason that the means of satisfying their desires are unlimited. We thus include with the ills of power in many cases all the pains which are usually (though improperly) called physical. But the distinctive pains of this class seem to be increased danger to life and the various social calamities and misfortunes which arise from the importunities, criticisms, threats, and enmities of those about a ruler or man of influence.

§ 40. The examination into which we have thus far gone discloses no new pleasures; but as always before, analysis only brings to view the primary pleasures and pains of which these are combinations and representations.

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[1] Prior's *Solomon*.

WEALTH—POVERTY.

§ 41. After disposing of the subject of Power, the analysis of Wealth and Poverty is comparatively simple. The term *wealth* characteristically designates a large class of pleasures; the term *poverty* a correspondingly large class of pains. We are not able to refer the pleasures of wealth at once and decisively to any one group of primary pleasures, as we are able to refer the pleasures of power to those of movement and exercise. But we can readily see where for the most part they lie. They are pleasures of possession, and of possessing something of advantage. Accordingly we are led back to find what things are of advantage. We enjoy eating, but that could not be called a pleasure of wealth. If, however, we have something which can procure us the pleasure of eating whenever we desire it, we have the beginning of the former pleasure. Whenever anything is found by experience to be pleasurable, an accumulation of that which will enable us to repeat the enjoyment is sought, and this accumulation, so far as it goes, is wealth. A gathering together of property of all such sorts as will be of any value is begun. Cattle, sheep, fruits, vegetables, grain, wine, to furnish something to eat and drink; garments for clothing; vehicles and horses for movement and exercise; houses for warmth and shelter; land from which corn can be raised, upon which houses can be built and property kept. Things like these furnish the staple of wealth. Money, as the representative of property and a convenient medium of exchange, comes to be afterward the symbol of wealth, and to be wealth. The pleasures of wealth then are pleasures which wealth brings, together with representations of those pleasures, including the knowledge that one has what will secure those pleasures; and the pleasures which riches bring are no new pleasures, but the very ones we have in the preceding chapters set forth and seen to be ultimately referrible to the appetitive cravings. Beyond, we can regard the advantages we are now considering as pleasures of power. Having possessions we are enabled thereby to do what we like with more freedom and facility. We can go where we please, we can accomplish what we desire, we can use others and control others for our purposes. Wealth and power are correlative. We *have* that we may *do*, and we work that we may obtain that which will give us greater power. All the associations of the one appertain to the other. (See Chap. XLV. § 19.)

§ 42. The pains of poverty which are most conspicuous are the primary pains of hunger, cold, disintegration. The absence of power or influence over others is little thought of by the sufferer in connection with the extreme forms of poverty. Yet above these, the restraint, the compulsion of untoward circumstances, the lessening of social influence, are felt severely. The hungry man is in agony; the poor man, who is yet above starvation, is crushed down and distressed by the hampering of his efforts in all directions. He has no power, he is an insignificant man among his fellows, in the community or the state. The pains of poverty seem to be therefore the positive presentative pains affecting life most directly, and further, the pains of impotence.

The poor man nevertheless, when his poverty is not extreme, has some advantages which the rich man lacks. Wealth brings corroding care, disintegrating the body, ruining the health. The poor man is free from this to a large extent, is perhaps very content and happy. Riches occasion envy, jealousy, enmity. The poor man escapes these and calls poverty a blessing. The pains of wealth are more notoriously the pains of society and of disease. The pleasures of poverty are (speaking generally) the pleasures of health, through temperance and frugality and the social pleasures.

§ 43. 'We really and justly look upon a person as possessing the advantages of wealth, not in proportion to the useful and agreeable things of which he is in the actual enjoyment, but to his command over the general fund of things useful and agreeable; the power he possesses of providing for any exigency, or obtaining any object of desire. Now money is itself that power; while all other things in a civilised state seem to confer it only by their capacity of being exchanged for money. To possess any article of wealth is to possess that particular thing, and nothing else; if you wish for another thing instead of it, you have first to sell it, or to submit to the inconvenience and delay (if not the impossibility) of finding some one who has what you want, and is willing to barter it for what you have. But with money you are at once able to buy whatever things are for sale; and one whose fortune is in money, or in things rapidly convertible into it, seems both to himself and others to possess not any one thing, but all the things which the money places at his option to purchase. The greatest part of the utility of wealth, beyond a very moderate quantity, is not the indulgences it procures, but the reserved power which its possessor holds in his hands of attaining purposes generally; and this power no other kind of wealth confers so immediately or so certainly as money. . . . . Money, being the instrument of an important public and private purpose, is rightly regarded as wealth; but everything else which serves any human purpose, and which nature does not afford gratuitously, is wealth also. To be wealthy is to have a large stock of useful articles or the means of purchasing them. Everything forms therefore a part of wealth which has a power of purchasing; for which anything useful or agreeable would be given in exchange.'[1]

The above quotation sets forth very exactly the meaning of the term *wealth*. From it appears clearly the fact, already dwelt upon to some extent, that the pleasures of wealth are very largely the pleasures of power.

§ 44. When examining the pleasures of knowledge we observed that the possession and the acquisition of knowledge sometimes gave pleasure without reflection upon any advantages which knowledge brings; but that this pleasure was the result of numerous past experiences of advantages derived from knowledge and their associations, and was wholly derivative and representative in its character; that in this we find the nature and meaning of the pleasure of knowledge in itself so-called. In like manner we find here an absorbing delight in the acquisition and possession of riches sometimes manifested, apparently irrespective of what riches bring. The same observation might have been made in the case of *power*. The miser loves gold for its own sake, not for what it will bring. But it should always be noticed that this interest in and gloating over gold is not a pleasure which exhibits itself till after association has made evident the value and utility of gold. Moreover, the miser delights in his gold from the knowledge of the power it gives him, and hoards it for fear he will lose the pleasures which are associated with it. A vivid realisation of the advantages of possessing wealth and the pains which attend its absence, causes him to clutch with firmer grasp the riches that fall to him and to revel in his gains when accumulated. Thus the pleasure of acquiring and possessing wealth for its own sake, is a representative pleasure which resolves itself into the pleasures which wealth brings; and these, as we have already seen, are traceable directly back to the primary pleasures.

§ 45. The benefits which riches confer are appreciated the better by contrast with the miserable state of the poor. Particularly is this the case with the more immediate, presentative comforts of wealth. Money purchases immunity from the ills of poverty. For some of these we will resort to the 'Anatomy of Melancholy:' 'They labour hard some, and yet cannot get clothes to put on, or bread to eat. For what can filthy poverty give else but beggary, fulsome nastiness, squalor, contempt, drudgery, labour, ugliness, hunger and thirst, ... fleas and lice. . . . . rags for his raiment and a stone for his pillow; . . . . he sits in a broken pitcher, or on a block for a chair . . . . he drinks water and lives on wort-leaves, pulse, like a hog, or scraps like a dog.' Thus far, more especially, hunger and thirst, cold, oppressive labour, restlessness (disintegration, prostration, irritation). Social evils and those of solitude follow: 'When they have taken all pains, done their utmost and honest endeavours, if they be cast behind by sickness or overtaken with years, no man pities them, hard-hearted and merciless, uncharitable as they are, they leave them so distressed to beg, steal, murmur, and rebel or else starve. . . . Yea that which is no small part of their torments, if once they come to be in distress, they are forsaken of their fellows, most part neglected and left into themselves.'

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[1] J. S. Mill, *Political Economy*. Prelim. Remarks.

In the following, disintegration is conspicuous:—

'His raw-bon'd cheeks, through penury and pine,
Were sunk into his jaws as he did never dine.'[1]

In this appears cold and hunger:—

'Poor naked wretches, wheresoe'er you are,
That bide the pelting of this pitiless storm!
How shall your houseless heads, and unfed sides,
Your loop'd and window'd raggedness, defend you
From reasons such as these?'[2]

Solitude is the fate of the poor:—

'Sleep seems their only refuge. For alas!
Where penury is felt the thought is chained,
And sweet colloquial pleasures are but few.'[3]

'What can be a more pitiable object than decrepitude, sinking under an accumulated load of years and penury? Arrived at that period when the most fortunate confess they have no pleasure, how forlorn is his situation, who, destitute of the means of subsistence, has survived his last child or his last friend. Solitary and neglected, without comfort and without hope, depending for everything on a kindness he has no means of conciliating, he finds himself left alone in a world to which he has ceased to belong, and is only felt in society as a burden it is impatient to shake off.'[1]

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[1] Spenser, *Faerie Queene*. [2] Shakspeare, *King Lear*. [3] Cowper, *Task*.

Of the numerous descriptions of poverty, that in Dickens's 'Tale of Two Cities,' in the chapter entitled 'the Wine-shop,' is one of the most vivid. Hawthorne's 'Outside Glimpses of English Poverty' in 'Our old Home' presents many graphic pictures.

§ 46. Let us now turn to some illustrations of the pains of wealth.

'Gold creates in brethren strife,
Gold destroys the parent's life,
Gold produces civil jars,
Murders, massacres, and wars,
But the worst effect of gold,
Love, alas! is bought and sold.'[2]

We thus start out with a collection of ills resulting from riches which are chiefly social and run back to disintegration. In the passage we will now read, some of the other primary pains are shown to follow the possession of wealth. 'When I compare together different classes, as existing at this moment in the civilised world, I cannot think the difference between the rich and the poor, in regard to mere physical suffering, so great as is sometimes imagined. That some of the indigent among us die of scanty food is undoubtedly true; but vastly more in this community die from eating too much than from eating too little, vastly more from excess than starvation. So as to clothing, many shiver from want of defence against the cold; but there is vastly more suffering among the rich from absurd and criminal modes of dress, which fashion has sanctioned, than among the poor from deficiency of raiment. Our daughters are oftener brought to the grave by their rich attire, than our beggars by their nakedness. So the poor are oftener overworked; but they suffer less than many among the rich, who have no work to do, no interesting object to fill up life, to satisfy the infinite cravings of man for action. According to our present modes of education, how many of our daughters are subject to an *ennui*—a misery unknown to the poor, and more intolerable than the weariness of excessive toil.'[3]

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[1] Robt. Hall, *Reflections on War.*

[2] Anacreon, XLIV. 10.

[3] Channing.

Increased danger to life is one of the evils of riches:

> 'Some pray for riches; riches they obtain;
> But watched by robbers, for their wealth are slain.'[1]

Exposure to danger, hatred, and strife, we notice among the evils of possessing riches, also the general ills of luxury. A third prominent group is that of the cares, vexations, and perplexities of wealth.

§ 47. The possession of wealth is apt to carry with it avarice, whose evils to the one having it are by no means inconsiderable.

> 'For of his wicked pelf his god he made,
> And unto hell himself for money sold;
> Accursed usury was all his trade,
> And right and wrong ylike in equal balance waide;
> His life was nigh unto death's dore yplaste;
> And threadbare cote and cobbled shoes he ware,
> He scarce good morsel all his life did taste,
> But both from back and belly still did spare,
> To fill his bags and richesse to compare:
> Yet child ne kinsman living had he none
> To leave them to, but thorough daily care
> To get and nightly feare to lose his owne.
> He led a wretched life unto himself unknowne,
> Most wretched wight whom nothing might suffice,
> Whose greedy lust did lack in greatest store,
> Whose need had end but no end covetise.
> Whose wealth was want, whose plenty made him poor,
> Who had enough, yet wished ever more.'[2]

In the miser's case we have the singular fact that the possession of riches not only is no aid but it is even a positive hindrance to the securing of the pleasures which wealth ordinarily brings. So that really many of the pains which attend the holding of wealth are pains of poverty. In so far as the pleasures of wealth and power are identical, the pains associated with the former are in truth the pains of impotence. The riches of the man circumscribe, restrain, hamper, and prevent him from doing the things which he desires to do. He has not the power to carry out his wishes from the very abundance he possesses.

§ 48. That poverty has its pleasures is made evident by the many who have spoken in its praise from Seneca down. The Greek writers are full of direct and indirect allusions to the evils of riches, and the happiness and content of the poor, who have the necessaries of life, but no accumulated riches.

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[1] Dryden.

[2] Spenser's *Fairie Queene*.

The pleasures of health, repose, and general contentment, form no mean part of the happiness of poverty.

'The rich
Have wakeful nights, whilst the poor man's turf
Begets a peaceful sleep.'[1]

'O blissful poverty !
Nature too partial to thy lot assigns
Health, freedom, innocence, and downy peace,
Her real goods.'[2]

The idea of repose mingled with social pleasures is here brought out:

'Be honest poverty thy boasted wealth;
So shall thy friendships be sincere, though few,
So shall thy sleep be sound, thy waking cheerful.'[3]

A very important set of pleasures associated with poverty is that embracing the delights of toil which is the inheritance of the poor.

'What doth the poor man's son inherit?
Stout muscles and a sinewy heart,
A hardy frame, a hardier spirit;
King of two hands, he does his part
In every useful toil and art;
A heritage, it seems to me,
A king might wish to hold in fee.'[4]

It is unnecessary to pursue the illustration of poverty's amelioration further. We will conclude, therefore, with a quotation from Herodotus, in which the benefits of riches and opposing advantages of poverty are referred to:—

'The rich man indeed is better able to indulge his passions and to bear up against any harm that may befall him. The poor man's condition prevents him from enjoying such advantages; but then as a set-off, he may possess strength of body, freedom from disease, a mind relieved from many of the ills of life; is blessed in his children and active in his limbs.'[5]

§ 49. In the preceding pages under this subdivision we have now, I think, reviewed the chief groups of pleasures and pains which lie in and about wealth and poverty. Though I have not taken the trouble specifically to analyse every illustration and argue the case for each one, it seems to me, in the light of the expositions in this and the former chapters, sufficiently clear that we have in these pleasures and pains nothing which is not reducible in the last resort to the primary; that we have in sooth nothing original here, but only derivative and representative pleasures and pains, new only in the new groupings made of materials already familiar.

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[1] Goffe's *Careless Shepherdess.*
[2] Fenton's *Marianne.*
[3] Havard's *Regulus.*
[4] J. R. Lowell.
[5] 1, 32.

REPUTATION.

§ 50. A great object of effort with mankind is reputation. Some are ready to do anything for the sake of fame, and are not always anxious that their fame shall be a good repute; with such, notoriety at all hazards is the watchword. Under this head, therefore, we shall consider the pleasures of good reputation and fame generally. On the other side, the corresponding pains naturally group themselves into two collections, the one embracing pains of bad repute, and the other evils of obscurity. All these pleasures and pains are social in their character and consequent upon a state of society. Were there only one human being in the world, he could have none of either pleasures or pains growing out of reputation; for reputation implies and means appreciation by other sentient beings. The primary pleasure of society is, therefore, intimately concerned in the pleasures which are now before us for consideration. The appetite for fame or notoriety seems to include something more than pleasure of the approval of other beings like ourselves; and yet it will be found the case, probably, that the former is after all but an extension of the latter. The man who is in search after fame is seeking approval. Nobody wishes to be known and cursed. Where fame is sought irrespective of the benedictions and maledictions of one's fellows, there is usually a considerable degree of love of power and eagerness for control, mingled with the craving for notoriety. There may be a love of applause simply, or a love of applause and of power together, the last sometimes overmastering the other.

§ 51. 'We all consider what is thought of us by those around us as a substantial good. Trust in our uprightness of character, belief in our abilities, and the desire that arises from this to be more intimately connected with us and to gain our good opinion, everything of this kind, is often a more valuable treasure than great riches.'[1]

'Who shall pretend to calculate the value of the inheritance of a good name? Its benefit is often great when dependent on no stronger ties than those which accident or relationships have created, but when it flows from friendships which have been consecrated by piety and learning, when it is the willing offering of kindred minds to departed worth or genius, it takes a higher character, and is not less honourable to those who receive than to those who confer it. It comes generally from the best sources, and is directed to the best ends; and it carries with it an influence which powerfully disposes all worthy persons to co-operate in its views. Nor is this all; the consciousness of the source from which it springs is wont to stimulate the exertions and to elevate the views of those who are the objects of it; and many instances might be enumerated of persons who have laid the foundation of the very highest fortunes upon no other ground than that which this goodly inheritance has supplied.'[1]

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[1] Schleiermacher.

In these two extracts we notice prominently and chiefly the pleasures of society. In the last we remark also the pleasures of movement and exercise, and the pleasures of wealth. A good name stimulates to action and enables our action to tell, while also it is the means of securing fortune.

§ 52. The possession of good repute as such seems to carry with it almost no drawbacks. The knowledge that one has a good reputation may sometimes operate to relax energy and cause one to rely more upon others than is wise. And frequently, where the reputation is especially fair, its possessor is a prey to the curious malice and hatred of others; by this means what was good reputation may be turned into bad, with all the attendant evils.

§ 53. Let us now look at that extension of the pleasure of good repute which is characterised by the term *Fame.*

'Of all rewards, I grant, the most pleasing to a man of real merit is fame.'[2]

I have already adverted to the pleasures of society and those pleasures which go to make up the pleasures of power as chief constituents in the pleasure of fame. To these there should be added the very important element of immortality. Fame causes us to live longer and extends beyond our death our influence. This is a variety of the pleasure of living as opposed to dying and disintegration. The love of life, perpetuity of existence, is native, appetitive, and strong in the human breast. Fame contributes in a considerable degree to satisfy that desire. All these pleasures now enumerated we have heretofore analysed. The idea of perpetuity is well brought out in the familiar lines :—

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[1] Anon.

[2] Goldsmith, *Citizen of the World.*

> 'Exegi monumentum aere perennius,
> Jamque opus exegi, quod nec Jovis ira, nec ignis,
> Nec poterit ferrum, nec edax abolere vetustas.'[1]

§ 54. Like the advantages of fame, so its evils arise from the social state. One who has fame is exposed to envy, slander, malice, and violence. Fame is seldom unaccompanied with power, and the jealousy of men is directed against its possessor :—

> 'Knows he that mankind praise against their will,
> And mix as much detraction as they can ?'[2]

> 'O place and greatness, millions of false eyes
> Are struck upon thee! volumes of report
> Run with these false and most contrarious guests
> Upon thy doings! Thousand scapes of wit
> Make thee the father of their idle dream,
> And rack thee in their fancies.'[3]

We thus see that one of the evils of fame is that it is likely to bring upon one the misfortunes of bad reputation.

An argument for the emptiness and worthlessness of fame is found in the following :—

> 'Vain, empty words
> Of honour, glory, and immortal fame,
> Can these recall the spirit from its place,
> Or re-inspire the breathless clay with life ?
> What tho' your fame with all its thousand trumpets
> Sound o'er the sepulchres, will that awake
> The sleeping dead ?'[4]

A great many evils attend the love of fame. As the pursuit of money and of power grows into an absorbing pleasure of itself, so the eager following after fame is an absorbing delight. Most of the pleasures and pains occurring in such a pursuit and arising out of the love of fame are covered by the word *ambition*, some of whose ills are thus set forth by the poets :—

> 'Ambition hath but two steps; the lowest,
> Blood; the highest, envy.'[5]

> 'O dire ambition! What infernal power
> Unchain'd thee from thy native depth of hell,
> To stalk the earth with thy destructive train,
> Murder and lust! to waste domestic peace,
> And every heartfelt joy.'[6]

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[1] Horatius. [2] Young's *Night Thoughts*. [3] Shakspeare, *Measure for Measure*.
[4] Sewell, *Sir Walter Raleigh*. [5] Lilly, *Midas*. [6] Brown, *Barbarossa*.

> 'Who soars too near the sun with golden wings,
> Melts them;—to ruin his own fortune brings.'[1]
>
> 'Their breath is agitation, and their life
> A storm whereon they ride to sink at last.'[2]

Sometimes poverty attends the pursuit of fame, as in the case of those who seek a literary or artistic reputation.

§ 55. The evils of extreme bad reputation are seen in the woe that befalls the murderer, who is hunted and pursued wherever he goes. The pains of bad reputation generally may be divided into two general classes, those that arise from the tendency a bad reputation has to drive people away from its possessor, and those arising from its tendency to induce people to injure him who has bad repute. The former class are the ills of solitude, the latter those of enmity, hostility, aggression, as experienced by him against whom they are directed. Both these divisions have already received sufficient treatment in other places.

It seems to me that the pains of obscurity are almost wholly negative. They are the pains arising from the absence of the pleasures of fame. Obscurity in itself is not painful. It is only offensive by comparison. When one thinks of the advantages and joys which a wide reputation gives, present obscurity is a source of pain. Seeing what others have, and having, perhaps, in some degree tasted the sweets of fame, a curtailment of those enjoyments or deprivation of them is hard to bear. The limitation of activity, relative impotence, lack of deference of one's fellows, poverty sometimes, all enter more or less into the pains of obscurity.

With these pains also are associated those of oblivion. The latter are nothing other than the pains of death as opposed to immortality.

The inconveniences of obscurity are very prominently counterbalanced by the pleasures of retirement. These are held by many to be far superior to the joys of fame. Sometimes, however, as in the case of the literary man, retirement is only a means by which a greater fame is aimed to be reached.

§ 56. In closing this division, I cannot do better than quote the following as still another expression here applied to Reputation and Fame, of the doctrine which has over and over again been brought forward and urged in these pages—the doctrine of the inter-connection and association of all the pleasures and pains:—

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[1] Shakspeare, *Cromwell.* [2] Byron, *Childe Harold.*

'Years of thought would leave untold the boundless topic Fame.
Every matter in the universe is linked in such wise unto others,
That a deep, full treatise upon one thing might reach to the history of all things;
And before some single thesis had been followed out in all its branches,
The wandering thinker would be lost in the pathless forest of existence.
What were the matter or the spirit, that hath no part in Fame?
Where were the fact irrelevant or the fancy out of place?
For the handling of that mighty theme should stretch from past to future,
Catching up the present on its way, as a traveller burdened with time.
All manner of men, their deeds, hopes, fortunes and ambitions,
All manner of events and things, climate, circumstance, and custom,
Wealth and war, fear and hope, contentment, jealousy, devotion,
Skill and learning, truth, falsehood, knowledge of things gone and things to come,
Pride and praise, honour and dishonour, warnings, ensamples, emulations,
The excellent in virtues and the reprobate in vice, with the cloud of indifferent spectators—
Wave on wave with flooding force throng the shoals of thought,
Filling that immeasurable theme, the height and depth of Fame.'[1]

CHARACTER.

§ 57. The pleasures of character are not the same as those of reputation. It is often the case that a person of good character has a good reputation, but not always so. A regard for reputation is an element in the formation of character, but the two sets of pleasures rest upon somewhat different bases. There is a pleasure in having a good reputation, there is another pleasure in the consciousness of deserving to have a good reputation; the latter is the pleasure of possessing good character. The foundation of the latter enjoyment is the possession of the subjective power to do that which will yield the greatest amount of happiness to the individual. Character relates to will, and is determined by habit. If a man by the force of habit does things evil, or is prone to do evil, his character is bad; if the reverse, his character is good. It may be a question whether a man's character does not appertain exclusively to his relations with others. It may be said that if only one man existed, he would have no character. In this view, a man of good character would be one who has the habit of acting and is prone to act in a manner beneficial to his fellow-men, or at least, one who does not and is not prone to act in a manner hurtful to society. If, however, man's relations to his fellows are not an essential factor in giving him a character, then one who has a habit of acting in such a manner as to most benefit himself, both as regards actions affecting primarily himself, and those affecting himself secondarily through his fellows, will be considered a man of good character.

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[1] Tupper, *Proverbial Philosophy*.

§ 58. Inasmuch as we shall recur to the subject of character in a subsequent chapter, I do not propose at present to devote much space to a consideration or illustration of the pleasures and pains connected therewith. If the exposition just made is correct, it is obvious that the pleasures of good and the pains of bad character are exceedingly complex and representative. Habit involves a repetition of experiences, an acquaintance with pleasures and pains and the pleasures of a good character are the representative pleasures of the good things attending actions found conducive to happiness and the further pleasure of having escaped a repetition of experiences found to be painful. One way in which the pleasures now under consideration may be described is to characterise them as pleasures of virtuous action, that is, of virtuous actions done, of the ability to do virtuous actions, and also of the inability to do vicious acts. If then the pleasures of good character are substantially the same as the pleasures of virtuous action, and the corresponding pains coincide with those of vicious action we have arrayed before us the immense congeries of pleasures and pains which the abstract names *virtue* and *vice* stand for, pleasures and pains as highly complex and representative as any that can be named in the whole catalogue.

§ 59. It will be conceded by all that a large section of the pleasures of virtuous action is the advantages which such action brings to the individual or upon the community. But it will be said by some that there is also a distinct pleasure arising from doing a virtuous action, irrespective of its consequences. That there is such a pleasure so arising irrespective of reflection upon the results of an action cannot be denied; but that such pleasure is really irrespective of these consequences and that it is an original pleasure, is not true. A set of facts exists here similar to those relating to knowledge upon which we commented in alluding to the pleasure of knowledge for its own sake, and similar to those we referred to in remarking upon the absorbing desire for the acquisition of riches. A long series of experiences repeated have taught the race that certain actions bring happiness; association is made of such acts, a class formed to contain them. When then a new action is thought of which is identified with this class the thought of doing it, and doing it, cause a representation of the pleasure which has been experienced in connection with doing all previous acts of that class. We are not able to trace this pleasure back to its sources without reflection, nor to analyse it into its elements. It hence appears to us as a new and distinct pleasure, whereas it is the collected force of countless pleasures experienced, associated, merged, and represented.

§ 60. In pursuance of the plan adopted in this part of the present work, a few illustrations will be given of the pleasures of good and the pains of bad character.

'Every virtue gives man a degree of felicity in some kind. Honesty gives a man a good report; justice, estimation; prudence, respect; courtesy and liberality, affection; temperance gives health; fortitude, a quiet mind not to be moved by adversity.'[1] All but the last two effects, it will be noticed relate directly to society, and of the last two the former to health and its primaries, while the last concerns repose in the first instance.

'A man of virtue is an honour to his country, a glory to humanity, a satisfaction to himself, and a benefactor to the whole world. He is rich without oppression or dishonesty, charitable without ostentation, courteous without deceit, and brave without vice.'[2]

'Know then this truth (enough for man to know)
Virtue alone is happiness below.'[3]

'Virtue, the strength and beauty of the soul,
Is the best gift of Heaven; a happiness
That even above the frowns and smiles of fate,
Exalts great Nature's favorites; a wealth
That ne'er encumbers, nor to baser hands
Can be transferred; it is the only good
Man justly boasts of, or can call his own.'[4]

'Are domestic comforts dead?
Are all the nameless sweets of friendship fled?
Has time worn out or fashion put to shame
Good sense, good health, good conscience, and good fame?
All these belong to virtue, and all prove
That virtue has a title to your love.'[5]

The social element in the pleasure is still prominent in the above and also in the following:—

'The heart unaltered in its mood,
That joys alone in doing good,
And follows in the heavenly road,
And steps where once an angel trod,—
The joys within such heart that burn
No loss can quench, no time o'erturn!'[6]

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[1] Walsingham. [2] Anon. [3] Pope, *Essay on Man*. [4] Armstrong. [5] Cowper, *Progress of Error*. [6] Hogg, *Virtue*.

'What, what is virtue but repose of mind,
A pure ethereal calm, that knows no storm.'[1]

'There is nothing which adds so much to the beauty and power of man as a good moral character. It is his wealth, his influence, his life; it dignifies him in every station, exalts him in every condition, and glorifies him at every period of life. Such a character is more to be desired than everything else on earth. It makes a man free and independent.'

We notice from the above that the pleasures of good character embrace pleasures of society, health, repose, wealth, power, fame, benevolence, strength, endurance, good sense, good conscience, immortality, freedom. Strength and endurance are readily identified or closely associated with health and power, good sense with knowledge and skill, and good conscience with repose:—

'I feel within me
A peace above all earthly dignities,
A still and quiet conscience.'[2]

All the other characteristics above referred to have already been analysed and referred to their proper places with the primary pleasures. Taken together they embrace the principal enjoyments and advantages connected with good character, and will be sufficient for our present purpose.

§ 61. The Hebrew Scriptures contain a great variety of depicted pains that attend bad character. The following quotations are from the Book of Job:—

'The wicked man travaileth with pain all his days, and the number of years is hidden to the oppressor. A dreadful sound is in his ears; in prosperity the destroyer shall come upon him. He believeth not that he shall return out of darkness, and he is waited for of the sword. He wandereth abroad for bread, saying, where is it? He knoweth that the day of darkness is ready at his hand. Trouble and anguish shall make him afraid; they shall prevail against him as a king ready to the battle. . . . And he dwelleth in desolate cities, which no man inhabiteth, which are ready to become heaps. He shall not be rich, neither shall his substance continue, neither shall he prolong the perfection thereof upon the earth.'[3] We notice prominently, disintegration, darkness, irritation, restlessness, hunger, solitude, poverty, defeat, death. So also in these words, similar pains: 'The gin shall take him by the heel, and the robber shall prevail against him. . . . His strength shall be hunger-bitten, and destruction shall be ready at his side. It shall devour the strength of his skin; even the first-born of death shall devour his strength. . . . His remembrance shall perish from the earth and he shall have no name in the street. He shall be driven from light into darkness, and chased out of the world. He shall neither have son nor nephew among his people, nor any remaining in his dwellings.'[1] Social disfavour and the ills of solitude, and the deprivations of the pleasures of immortality and enduring fame, are here brought out also. Still more strikingly is the social disfavour expressed in a succeeding chapter: 'Men shall clap their hands at him and shall hiss him out of his place.'[2]

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[1] Thomson, *Castle of Indolence.* [2] Shakspeare, *Henry VIII.* [3] Chap. XV.

Future punishment after death is no mean item of pain attached to bad character: 'So shall it be at the end of the world; the angels shall come forth, and sever the wicked from among the just, and shall cast them into the furnace of fire; there shall be wailing and gnashing of teeth.'[3]

§ 62. The destructiveness of vice to society generally is well described by Colton: 'A society composed of none but the wicked could not exist; it contains within itself the seeds of its own destruction, and, without a flood, would be swept away from the earth by the deluge of its own iniquity. The moral cement of all society is virtue; it unites and preserves, while vice separates and destroys. The good may well be termed the salt of the earth. For where there is no integrity, there can be no confidence; and where there is no confidence, there can be no unanimity.'

§ 63. That form of the pains of bad character which is indicated by the terms *conscience*, *remorse*, is deserving of special mention. 'No man but inwardly thinks well of that which is good while he neglects it; and thinks ill of that which is evil while he commits it.'[4] 'Their thoughts are accusing or excusing. An inward comfort attends good actions, and an inward torment follows bad ones; for there is in every man's conscience fear of punishment and hope of reward.'[5] 'Have we not known or heard of men struck by so deep a dart, that could not be drawn out by the strength of men, or appeased by the pleasure of the world. . . . The two principal divisions of the pains of conscience—the one relating to the present life, the other to the future—are exemplified in the two following passages :—

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[1] Chap. XVIII. [2] Chap. XXVII. [3] Matt. xiii. 49.
[4] Charnock, *Attributes*. [5] *Ibid.*

> 'Sed metus in vita poenarum pro malefactis,
> Est insignibus, insignis ; scelerisque luela
> Carcer et horribilis de saxo jactus eorum,
> Verbera carnifices robur, pix, lamina, tedæ.'[1]

'But in this life the fear of pains for wicked deeds is felt acutely; the prison, the fearful fall from the rock, scourges, the executioners, the pitch, the wheel, the torch—these affright the mind.'

> 'He fears not dying—'tis a deeper fear—
> The thunder peal cries to his conscience—"Hear!"
> The rushing winds from memory lift the veil,
> And in each flash his sins, like spectres pale,
> Freed from their dark abode, his guilty breast,
> Shriek in his startled ear, "Death is not rest!"'[2]

§ 64. Paley divided the virtues into duties toward God and toward other men, and toward ourselves. The first two branches of these are social in their character, and the vices corresponding to the particulars he enumerates are social and grow out of the social state. And to the pleasures of society and their associates we shall have no difficulty in referring all those duties that concern others primarily, and to the pains therein implied, and also to the predatory appetites the vices characterised by a breach of those duties, as impiety, ingratitude, injustice, hatred, infidelity and the like. So also in the other branch the mind suggests at once as among the pains of bad character, the evils associated with the opposites of 'chastity, sobriety, temperance, preservation of life, care of health, etc.'[3] But in none of these do we seem to have any new pleasures and pains, but only those previously analysed and referred to the primary pleasures and pains for their origin and explanation.

SOCIAL ORDER—LIBERTY : ANARCHY, DESPOTISM.

§ 65. Among the social pleasures and pains, those attendant upon social order and prosperity and their opposites, are of great consequence. The happiness of the state is the happiness of the individuals composing it ; and the happiness of the multitude tends to the happiness of each one. So then a condition of general prosperity is a pleasurable thing, greatly to be desired; a condition of tumult, disorder and woe, equally to be deprecated.

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[1] Lucretius, *De Nat.* etc. 3, 10, 24.
[2] Mrs. Hale.
[3] See Paley, *Mor. and Pol. Phil.* Bk. I. Chap. VII.

§ 66. It will be admitted at once that a state of general social order is a state of general felicity, and a state of general anarchy one of general misery. The manner in which the general happiness or unhappiness comes to affect the happiness of the individual has been pointed out in preceding chapters; the justification of the principle of the organic unity of man has already been found, and the source of it has already been revealed. It lies simply in the primary pleasure of society and the primary pain of solitude, with which, of course, are associated closely all the other pleasures and pains, of which human nature is susceptible.

§ 67. Many of the pleasures of social order are described as those of peace, contentment, and rest in the following passage from De Tocqueville: 'The existence of the townships of New England is in general a happy one. Their government is suited to their tastes and chosen by themselves. In the midst of the profound peace and general comfort which reign in America, the commotions of municipal life are unfrequent. The conduct of local business is easy. The political education of the people has long been complete; say rather that it was complete, when the people first set foot upon the soil. In New England, no tradition exists of a distinction of ranks; no portion of the community is tempted to oppress the remainder; and the wrongs which may injure isolated individuals are forgotten in the general contentment which prevails.'[1]

Social order implies immunity from the injuries to person and property which attend wars, tumult, and criminal violence.

'Augustus bids the rage of war to cease,
And shuts up Janus in eternal peace.'[2]

Domestic felicity and conviviality attend social order.

'Our wives and children share our joy
With Bacchus's jovial blessings gay.'[3]

In social order, agriculture and commerce flourish, and labour and plenty, as the result of toil, exist, while social mirth and jollity prevail.

'Safe by thy cares her oxen graze,
And yellow Ceres clothes her fields;
The sailor ploughs the peaceful seas,
And Earth her rich abundance yields;

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[1] *Democracy in America*, Chap. V.

[2] Horace, *Odes*, Bk. IV. 15, Francis's trans.

[3] Horace, *Odes*, Bk. IV

While nobly conscious of unsullied fame,
Fair honour dreads th' imputed sense of blame;

. . . .

Safe in his vineyard toils the hind,
Weds to the widow'd elm his vine,
Till the sun sets his hill behind,
Then hastens joyful to his wine,
And in the gayer hours of mirth implores
Thy godhead to protect and bless his stores.'[1]

§ 68. The transition from the pleasures of social order to those of liberty is easy. We now see that the pleasures of liberty are pleasures of movement conditioned by the social restraints securing to each man the greatest amount of freedom from hindrances at the hands of others. There is an equilibrium, a balance of pleasures of movement and of society.

'To do what we will is natural liberty; to do what we will consistently with the interests of the community to which we belong is civil liberty; that is to say, the only liberty to be desired in a state of civil society. I should wish to act, no doubt, in every instance as I pleased; but I reflect that the rest also of mankind would do the same; to which state of universal independence and self-direction I should meet with so many checks and obstacles to my own will from the opposition and interference of other men's, that not only my happiness, but my liberty, would be less than whilst the whole community were subject to the domination of equal laws. The boasted liberty of a state of nature exists only in a state of solitude. In every kind and degree of union and intercourse with his species, it is possible that the liberty of the individual may be augmented by the very laws which restrain it; because he may gain more from the limitation of other men's freedom than he suffers from the diminution of his own.

Natural liberty is the right of common upon a waste; civil liberty is the safe, exclusive, unmolested enjoyment of a cultivated enclosure.'[2]

The pleasures of liberty are lasting and abundant. Liberty produces general plenty to eat and drink; the pains of subjection and restrained toil are abated; poverty is lessened. In the following, are mentioned social order as exhibited in justice, general peace and considerations of benevolence or love for one's neighbour:—

'What art thou, Freedom? Oh! could slaves
Answer from their living graves

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[1] Horace, *Odes*, Bk. IV.

[2] Paley.

This demand tyrants would flee
Like a dream's dim imagery.
Thou art Justice—ne'er for gold
May thy righteous laws be sold,
As laws are in England; thou
Shieldest alike high and low.
Thou art peace—never by thee
Would blood and treasure wasted be,
As tyrants wasted them when all
Leagued to quench thy flame in Gaul!
Thou art Love; the rich have kissed
Thy feet, and like him following Christ
Given their substance to be free,
And through the world have followed thee.'

§ 69. We will now turn to a few illustrations of the opposite pains. The evils of anarchy are set forth very completely in the many descriptions of the occurrences of the French Revolution. The following passages from Edmund Burke will be sufficient for our purposes: 'Laws overturned; tribunals subverted; industry without vigour; commerce expiring; the revenue unpaid, yet the people impoverished; a church pillaged and a state not relieved; civil and military anarchy made the constitution of the kingdom; everything human and divine sacrificed to the idol of public credit, and national bankruptcy the consequence; and to crown all, the paper securities of new, precarious, tottering power, the discredited paper securities of impoverished fraud and beggared rapine' . . . 'Flushed with the insolence of their first inglorious victories, and pressed by the distresses caused by their lust of unhallowed lucre, disappointed but not discouraged, they have at length ventured completely to subvert all property of all descriptions throughout the extent of a great kingdom.'[1] 'Two persons cannot meet and confer without hazard to their liberty and even to their lives. Numbers scarcely credible have been executed and their property confiscated. At Paris and in most other towns, the bread they buy is a daily dole, which they cannot obtain without a daily ticket delivered to them by their masters. Multitudes of all ages and sexes are actually imprisoned. I have reason to believe that in France there are not for various state crimes so few as twenty thousand actually in jail—a large proportion of people of property in any state. If a father of a family should show any disposition to resist, or to withdraw himself from their power, his wife and children are cruelly to answer for it. It is by means of these hostages that they keep the troops which they force by masses (as they call it) into the field, true to their colours.'[1]

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[1] *Reflections on the Revolution in France.*

Abatement of industry, prostration of commerce and trade, poverty, fraud and robbery, murder, deprivation of social and family pleasures—all attend anarchy. Despotism, in opposite condition to civil liberty, is closely related and leads to anarchy.

§ 70. Addison, in the 'Spectator' (No. 287), thus comments on the evils of despotism: 'But in all despotic governments, though a particular prince may favour arts and letters, there is a natural degeneracy of mankind, as you may observe from Augustus's reign, how the Romans lost themselves by degrees until they fell to an equality with the most barbarous nations that surrounded them. Look upon Greece under its free states, and you would think its inhabitants lived in different climates and under different heavens from those at present, so different are the geniuses which are formed under Turkish slavery and Grecian liberty. Besides poverty and want, there are other reasons that debase the minds of men who live under slavery, though I look on this as the principal. This natural tendency of despotic power to ignorance and barbarity, though not insisted upon by others, is, I think, an unanswerable argument against that form of government, as it shows how repugnant it is to the good of mankind, and the perfection of human nature, which ought to be the great ends of all civil institutions.'

In this connection let us note also the ills of slavery:—

'We and our fathers, from our childhood bred
To watch the cruel victor's eye, to dread
The arbitrary lash, to bend, to grieve,
(Outcast of mortal race!) can we conceive
Image of aught delightful, soft or gay?
Alas! when we have toiled the longsome day,
The fullest bliss our hearts aspire to know,
Is but some interval from active woe,
In broken rest and startling sleep to mourn,
Till morn, the tyrant and the scourge return.'[2]

§ 71. Of course there are pains attached to social order and to liberty as there are some pleasures and advantages to somebody in anarchy, despotism, and slavery; but of these there is no need to speak. We note in concluding this section that the pleasures of social prosperity are the pleasures of the individuals composing the society, and similarly that the pains of social adversity, disorder and decadence are pains of the individuals making up the social organisation. Those pleasures are characteristically the pleasures resulting from the happiness of others about us, in addition to the egoistic pleasures; those pains are the pains resulting from the unhappiness of our fellows added to the positive egoistic pains. From the extracts hitherto made, we observe that the chief benefits of a state of social order and a condition of liberty relate to peace, property, personal security, freedom to pursue one's avocations unhindered, social and sexual enjoyment. Pleasures of peace are those of repose, those of the possession of property refer to repletion as opposed to hunger and thirst, those of personal security to the integrity of the body, those of freedom to pursue one's avocations to freedom of movement, the others to society and sexuality. In like manner the pains we have been considering are pains of unrest, deprivation and insecurity of property, danger to life and limb, restraint of all kinds, loss of social and family delights; these in their turn are directly referrible to irritation, hunger and thirst, disintegration and prostration, inability to move, sexual denial and solitude.

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[1] *On the Policy of the Allies.*

[2] Prior's *Solomon.*

HEAVEN—HELL.

§ 72. There is a class of pleasures upon which the mind loves to dwell, which appertain to a life beyond the present, and which are made the subject of eager anticipation. These are the pleasures of heaven. With the majority of people they are pleasures of imagination. Some, however, claim to have actually witnessed them while in the body, and to have heard the testimony of those who were actually enjoying them. So far as they are pleasures of imagination they are representative pleasures. So far also as they are indicated by testimony of others, they must be equally representative pleasures, for in order to have any meaning at all the testimony must appeal to analogies of experienced pleasures. The pleasures of heaven must be described to me in terms which recall pleasures I have known in order to be of any significance. To the degree then that any one not in heaven (meaning by that term a state of bliss beyond death) has any notion of anything appertaining to that state or place, it must be an intellectual apprehension of things not present, that is, it must be a representative cognition. Hence the feelings accompanying such a conception are representative feelings, and they may be either simple reproduced pleasures transferred in anticipation to the future, or pleasures attendant upon the more complex products of association covered by the term fictions.

§ 73. The fact that the pleasures I am now speaking of, are not real and present, but ideal and anticipatory to almost all the human race, is still further evident from the reflection that death is necessary to have occurred before they can be enjoyed presentatively. To be sure Enoch, it is said, and Mohammed, and others were translated without tasting death, but even in their case it is not denied by anyone that some change equivalent to death occurred. And no one who has passed through this change comes back to dwell again in this world, so that to us here, whatever pleasures and pains wait upon the future life are, from the nature of the case, pleasures and pains of expectation. Our only clue to them, if any there be, is from testimony such as I have indicated, and we only appreciate them from imagination and analogies made according to the testimony we receive.

It is not my purpose now to investigate the value of such testimony so far as to ascertain what reliance can be placed upon it as to its truth. It is for us here only to observe that among the pleasures of the human mind are these ideal representative pleasures relating to a heaven, to note the character of those pleasures, and to connect them, if they are to be connected, with the other pleasures of which human nature is susceptible.

§ 74. Similar observations may be made, *mutatis mutandis*, with regard to the pains of a hell. Those pains are ideal, representative, and anticipatory.

§ 75. In the illustration I shall give of the pleasures and pains now before us, I shall not go beyond the Jewish Scriptures, the Heaven and Hell of Emanuel Swedenborg, and the great work of Dante. With a few references to these works, we shall be able, I think, to obtain a fair specimen of what people have had in mind, when they have spoken of the pleasures of heaven and of hell's pains.

§ 76. One marked feature of the idea of heaven is the absence of all pain whatsoever. Everything is enjoyment and delight. 'And God shall wipe away all tears from their eyes; and there shall be no more death, neither sorrow, nor crying, neither shall there be any more pain; for the former things have passed away.'[1] Irrespective of any positive pleasures, the removal of all pain would in itself be a source of unspeakable delight in contemplation. I can do what I like, unhindered, unrestrained by present or expected ill. The pleasure we have in this thought is but a representation of the pleasure felt when pain is overcome in an increasing flood of vitality. When I overcome an obstacle, when I rest after exertion, when I am recovering from disease, as vitality waxes, I experience an exuberance of pleasure, which seeks to perpetuate itself. When I think of pain there is a representation of vital depressions; when I think of pleasure driving out and putting away pain for ever, there is a corresponding representation of vital exhilarations. Representative pleasure of nervous vitality is here the distinguishing characteristic.

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[1] Revelation of St. John, chap. xxi. 4.

§ 77. Among the positive pleasures of Paradise, there are none so conspicuous and so much dwelt upon as those of light. There is scarcely a canto of Dante's Paradise that does not impress the idea of light as one great joy of the celestial abode. 'Glory,' 'lustre,' 'glow,' 'brilliancy,' 'sparkle,' 'radiance,' 'splendour,' 'sparkling,' 'flame,' 'dazzling,' 'effulgence,' 'brightness,' 'flaming,' 'fiery,' 'light,' 'warmth,' fire,' are terms constantly recurring. The delights of colour are depicted with great effect. Gems, flowers, and shining raiment are frequently referred to. The pleasures are both those of heat and the more representative pleasures of light, but especially the latter, embracing all the æsthetic pleasures of light.

> 'Much is accorded in that holy place
> Denied us here; thanks to the hallowed ground
> Made for the dwelling of the human race.
> Not long could I endure the ardent glow;
> Yet long enough to see sparks burst around,
> Such as we see from red-hot iron flow.
> Suddenly day seemed added unto day;
> As though another sun had in the skies
> Been set by him who rules with boundless sway.'[1]

The XXII. canto is also remarkable for its portrayal of the beauties of light. The sunrise and the sunset evidently furnish the type for these descriptions, and the pleasures dwelt upon are representations of those felt in the contemplation of such natural phenomena. Swedenborg compares the light to that of the noon-day sun. 'That there is light in the heavens cannot be conceived by those who only think from nature, and yet the light of the heavens is so great as to exceed by many degrees the noon-day light of the world. I have often seen it, even in the evening and the night.

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[1] Canto I. 55. Wright's trans.

In the beginning of my experience I wondered when I heard the angels say that the light of the world is little better than shade compared with the light of heaven; but since I have seen it I can testify that it is so. Its whiteness and brightness are such as to surpass all description. The objects seen by me in the heavens were seen in that light; thus far more clearly and distinctly than objects can be seen in the world.'[1]

'And the city had no need of the sun, neither of the moon to shine in it; for the glory of God did lighten it, and the Lamb is the light there. And the nations of them that are saved shall walk in the light of it; and the kings of the earth do bring their glory and honour into it. And the gates of it shall not be shut at all by day; for there shall be no night there.'[2]

In all these descriptions the light is spoken of as different from the natural light—as a clarified or spiritual light. But the difference in the character and effect of the light is after all one of degree and not of kind. For this celestial light is always compared with the natural, being spoken of as more intense and more beautiful, but still as being *light*; and it appeals to us as a pleasurable experience only by evoking representations of the pleasures we have experienced from natural light and imagining them to be very greatly enhanced.

§ 78. Another great source of heavenly joy as commonly anticipated is society. It will be recollected that in a former chapter we explained the primary pleasure of society to be that of the amicable presence of another being of like endowments. In the society of heaven this pleasure is carried in imagination to its highest extent. In Dante's work, social intercourse of the good is the chief occupation and delight of the redeemed. Social love is the animating principle of the place. Conversation, singing, reminiscence, and all the joys of social intercourse are here experienced in their perfection. There is a regularly organised society in ranks, constituting together the sacred hierarchy. Gratification of the social wants is carried to such an extent that everyone knows the thoughts of every other; there is the most intimate communion of minds.

According to Swedenborg heaven is divided into societies, according to the likenesses of the inhabitants. 'There are in heaven, as on earth, various administrations; for there exist there, ecclesiastical affairs and domestic ones. That there exist there ecclesiastical affairs, is manifest from what was stated and shown above, respecting divine worship (221–227). That there exist there civil affairs is plain from what was advanced respecting Governments in heaven (213–220). And that there exist there domestic affairs from what has been detailed respecting the habitations and mansions of the angels (183–190); and respecting marriages in heaven (366–380). It hence follows that many occupations and administrations exist within every heavenly society.'[1]

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[1] *Heaven and Hell*, 126.

[2] Revelation xxi. 23.

Though social love plays so prominent a part in heavenly joys sexual love does not seem to be a salient feature. It is commonly implied, however. In Swedenborg it is distinctly asserted in those passages which speak of marriages in heaven. Jesus, however, would have us believe that in the future state there is no marrying and giving in marriage. But certainly the filial and paternal relations are always allowed to exist. One great element of heaven's blessedness is the freedom of approach to and the enjoyment of the Divine Father. The worshippers of the Virgin Mary ascribe a similar maternal character to her intercourse with the souls forming the heavenly community.

§ 79. I think the idea of light is the chief one in the thought men have entertained of the appearances of their heavenly dwelling places; and the idea of social love is the principal one respecting the community of life there. Of more egoistic pleasures those of rest are certainly very prominent, and probably the most eagerly anticipated.

For instance, we find in Canto III. of the Paradiso the joys of contentment and peace (repose):—

> 'O brother, Charity so calms our will—
> We know not what it is to thirst for more;
> And full contentment every heart doth fill.
>
> . . . .
>
> And hence, though diverse are the seats we fill,
> All are content, as is the King benign,
> Who moulds our hearts according to his will.
> Our peace is in his will.'

Again, the pleasures of movement and rest in contrast appear in Canto VIII.:—

> 'So other lights beheld I in that light,
> Circling with more or less celerity,
> As beamed the Eternal vision on their sight.

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[1] *Heaven and Hell*, 387.

Never from lofty cloud descended wind
Or visible or not, so rapidly,
But slow would seem its progress and confined,
Contrasted with those heavenly lights—

. . . . . .

Yet would it please thee, rest will be awhile
As sweet as motion—so intense our love.'

The joys of movement and exercise also appear in those descriptions of the flight of angels or souls in flocks arranging themselves in strange forms, as of an eagle, a wreath, a cross, or to form letters.[1]

The dance also has been thought to be one of the heavenly pleasures. In the XIIIth Canto, the dance, social songs and work or occupation are all referred to in the same connection:—

'The song and dance completed, now they bend
On us their holy eyes; then joyfully
Hailing each other, to their tasks attend.'

Passing now from Dante to Swedenborg, we find that heaven, as he declares it to be, is a place where there is a close correspondence with the experiences of earth. There is a sun in heaven (116 ff.); light and heat (126 ff.); four quarters—east, south, west, and north (141 ff.). The spirits of the redeemed 'have all the senses that man has, much more exquisite than his are.' The objects seen there are 'in great part like those which exist on earth, except that they are more perfect in form and more abundant in number' (171 ff.). There are 'gardens and paradises full of trees and flowers of every kind;' 'arbours and walks' (176). The inhabitants 'have clothes, houses, and other things of that nature' (177 ff.); 'palaces, so magnificent as to surpass all description' (185); 'good government' (213 ff.); household order—master and domestics (219); divine worship—temples, churches, and preaching (221); occupations innumerable (387 ff.). Moreover, there is perfect contentment, love and peace. 'In order therefore that the well-disposed who know not what heavenly joy is may know and understand, they are first led to paradisiacal scenes that surpass every idea that imagination could form. They now suppose that they have come into the heavenly paradise; but they are instructed that this is not in reality heavenly happiness. It is therefore granted them to experience interior states of joy to the inmost of their capacity for perceiving them. They are afterwards led into a state of peace to the inmost degree that is capable of being opened in them, when they confess that nothing of its nature can be expressed in words, nor conceived in imagination. Finally they are brought into a state of innocence, also to the inmost sense of it of which they are capable. Hence it is granted them to know what spiritual and celestial good truly is' (412).

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[1] Cantos XVIII., X., XIV.

In the Hebrew Scriptures, the most notable description of heaven is that in the last chapter of Revelation, when it is represented as a city marvellously beautiful and full of precious things. A state of peace is also a prominent idea (Jno. xiv. 27; Ch. xvi. 33; Isaiah xxxii. 17, 18); of innocence as that of children (Mark x. 14, 15; Luke xviii. 16, 17). The inhabitants are clothed in white garments (Rev. iii. 4, 5); they worship and serve (Rev. vii. 9 ff.); they sing (xv. 3, 2) and play on musical instruments.

§ 80. Of course I have not referred to a tithe part of the pleasures that have been attributed to heaven and the celestial state, but all that have been mentioned (and I think they are the principal ones) are projections into the future of present and past experiences re-combined and redintegrated, and the relationship of everyone of them to the primary pleasures is distinctly traceable. And a like result would follow further research to whatever extent carried, the spiritualising of material things upon which stress is always laid consisting solely of the abstraction and removal of all that is painful and disagreeable in the associations of those material things. I have no doubt that if the investigation were carried out it would be found that every pleasure of which human nature has shown itself susceptible has been by someone and at some time transferred to the future life. Among the more gross, heaven consists in freedom to enjoy their grosser pleasures; as men grow more refined and more æsthetic, heaven also becomes more æsthetic, and the lower pleasures are sedulously kept out of it. The cannibal's heaven contemplates an abundance of human flesh; the American Indian's happy hunting-grounds; the Mohammedan's demands the soft embraces of houris; while the intellectual European thinks it heaven enough to sit and talk with God or Christ and the good and great of all ages. In all cases the pleasures of heaven are representations of the pleasures of earth, and, like the latter, are off-shoots and refinements of the great fundamental appetites.

§ 81. Turning now to the pains of hell, as we have found the pleasures of heaven to be the pleasures of earth with the disagreeable and painful associations removed, so now we shall discover that the pains in question are the pains of earth represented with little or none of their alleviations and ameliorations. The Hebrew Scripture idea of hell is almost wholly one of torment by burning and suffocation. 'He opened the bottomless pit, and there arose a smoke out of the pit, as the smoke of a great furnace; and the sun and the air were darkened by reason of the smoke of the pit' (Rev. ix. 2). 'Out of their mouth issued fire and smoke and brimstone; and by these was the third part of man killed; by the fire and by the smoke and by the brimstone' (Rev. ix. 17, 18). 'If any man worship the beast, the same shall drink of the wine of the wrath of God, which is poured out without mixture into the cup of his indignation; and he shall be tormented with fire and brimstone' (Rev. xiv. 9, 10). 'They were cast into a lake of fire burning with brimstone' (xix. 20; xx. 14, 15; xxi. 8). 'Then shall he say unto them on the left hand, Depart from me, ye cursed, into everlasting fire, prepared for the devil and his angels' (Matt. xxv. 41). They shall be 'cast into everlasting fire'—'into hell fire'—'where their worm dieth not and the fire is not quenched' (Matt. xviii. 8, 9; Mark ix. 43-48).

The hell of Dante, like that of the Jewish writings, is principally a place of physical torture; but there is a much wider range of suffering than that taught by the Bible. Dante goes over nearly the whole ground of human susceptibility to physical pain.

As Dante's heaven is resplendent with light, so his hell is the abode of shadows and darkness:—

'Obscure it was—so cloudy, deep, and dense,
That though to pierce the gloom I strained my sight,
Nought could I see within the gulf immense;
Now go we down to dusky regions blind.'[1]

The approaches to hell resound with the cries and groans of those in bodily pain:—

'There sobs and wailings and heart-rending cries
Resounded through the starless atmosphere;
Whence tears began to gather in mine eyes.
Harsh tongues discordant—horrible discourse—
Words of despair—fierce accents of despite—
Striking of hands—with curses deep and hoarse
Raised a loud tumult, that unceasing whirled
Throughout that gloom of everlasting night.'[2]

In the same Canto, Charon strikes and beats 'each reluctant soul.'

[1] Canto IV.

[2] Canto III.

In Canto VI. 'the gluttons are tormented with snow and hail.' In Canto VII. the doomed souls are forced to fight; some in the Stygian lake,

> 'A crew all naked, and with mud o'erspread,
> Whose threatening looks their inward rage bespake;
> Each struck the other, not with hands alone,
> But with the breast and with the feet and head;
> Their teeth, too, tore each other to the bone.'

In Canto VIII. spirits are immersed in filth; in Canto IX. in hot furnaces like vast tombs they are tormented. In Canto XII. the violent are boiled in blood, and shot and wounded with arrows. In Canto XIII. the wicked are transformed into trees and suffer as the boughs are rent from them; others are torn by bloodhounds; in Canto XIV. wretches expiate their crimes in 'a thick and arid sand' on which fall 'large flakes of fire.' In Canto XVIII. the seducers are excoriated by 'horned fiends' 'with monstrous rods in hand;' the flatterers are immersed in 'ordure foul.' In Canto XIV. the punishment is burning the soles of the feet, the head being fixed downward.

> 'Quivering in air his tortured feet were seen.'

In Canto XX. the sorcerers are compelled to walk with their faces twisted behind. In Canto XXI. the peculators are plunged in burning pitch and prodded by demons with forks. In Canto XXIII. the hypocrites wear heavy leaden cloaks. In Canto XXIV. the thieves are continually bitten by fiery serpents. In Canto XXVI. evil counsellors are burned in flames. In Canto XXVIII. heretics have their limbs and bodies mangled. In Cantos XXIX. and XXX. leprous and other diseases are the proximate causes of the sufferings. In Canto XXXII. the sinners are imbedded in a lake of ice and gnaw each other's scalps; and finally in the last Canto some are mangled by the teeth of Dis. Likewise in the Purgatorio the punishments are of the same character. The proud are crushed by the weight of heavy stones (Canto X.); the envious are clothed in sackcloth and have their eyes sewn up; the wrathful are clouded by a dark, foul vapour (XVI.); the lukewarm to God are spurred on unceasingly and without rest (XVIII.); the avaricious are stretched out immovable and ill at ease (XIX.); the gluttons are starved (XXIII.) and tantalised (XXIV.). In all these the most presentative pains are almost exclusively depicted.

§ 82. The hell of Swedenborg is very different from that of Dante. Mental torture and pain seem to be more the distinguishing characteristics. 'But, in general, all the inhabitants of hell are governed by their fears. Some are governed by fears that had been implanted in them while they lived in the world, and which still retain an influence; but as these are not sufficient, and also gradually lose their force, they are governed by fears of punishment' (543). Hell is a society, or is composed of societies of those who love themselves alone, and who are destitute of altruistic impulses. Represent to yourself a society composed of such characters, all of whom love themselves alone, and no others, further than as they make one with themselves, and you will perceive that their love is no other than that which exists among robbers, who, so far as their associates act in conjunction with themselves, embrace them and call them their friends; but who, so far as any do not act in conjunction with themselves, but reject their domination, fall upon them and slay them. 'If the interiors of such characters or their minds are examined, it will appear that they are full of moral hatred against each other, and that in heart they laugh at all justice and sincerity, and also at the Divine Being, whom they reject as of no account whatever' (560).

The prevailing idea seems to be a community in which each one indulges to the fullest extent the predatory inclinations. 'The evils which possess those who are immersed in the love of themselves are in general contempt of others, envy, enmity against those who do not side with them, hostility on that account, hatred of various kinds, revenge, cunning, deceit, unmercifulness, and cruelty' (562). 'As by the fire of hell is to be understood all the lust of doing evil flowing from self-love, by the same is also meant torment, such as exists in the hells. For the lust flowing from that love is in those who are inflamed by it. The lust of doing injury to all who do not honour, respect, and pay court to them; and in proportion to the anger which they thence conceive against such individuals, and to the hatred and revenge inspired by such anger, is their lust of committing outrages against them. Now when such a lust rages in every one in a society, and they have no external bonds to keep them under restraint such as the fear of the law and of the loss of character, of honour, of gain, and of life, every one under the influence of his own evil attacks another, and, so far as he is strong enough, subjugates him, subjects the rest to his own authority, and exercises ferocious outrages, with delight upon all who do not submit to him. This delight is inseparably attendant upon the love of tyrannous rule, so that they accompany each other by equal steps; for in enmity, envy, hatred, and revenge, which are the evils of that love, as has before been stated, the delight of doing injury exists inherently. All the hells are societies of this description; on which account every spirit in every society cherishes hatred in his heart against every other; and under the influence of such hatred, breaks out into savage outrages against him, so far as he is able to inflict them. These outrages and the torments so occasioned are also meant by hell fire, for they are the effects of the lusts which there prevail' (573). 'As for the gnashing of teeth, this is the continual disputing and combating of different falsities, and by consequence of those who entertain them with each other; combined with contempt of others, enmity, derision, mockery, and revilement; which also break out into butcherly assaults of various kinds; for every one fights for his own false persuasion and calls it the truth' (575).

The situation and general appearance of hell (or the hells, as Swedenborg terms the localities) is somewhat similar to that of Dante's Pandemonium. 'All, when looked into, appear dark and dusky; but the infernal spirits who are within them find themselves in a sort of light, resembling that emitted from ignited charcoal' (584). 'Those apertures or gates leading to the hells which are situated under the plains and valleys, have different appearances to the sight. Some are like those which are under the mountains, hills and rocks (the latter appear like the holes and fissures of rocks); some are like caves and caverns; some are like great chasms and whirlpools; some are like bogs, and some are like stagnant pools of water . . . In some hells are seen what appear like the ruins of houses and cities produced by fires, in which the infernal spirits dwell, and in which they conceal themselves. In the milder hells are seen what appear like rude cottages, in some places arranged contiguously, in the manner of a city with lanes and streets, and within these houses are infernal spirits, who are engaged in continual altercations, displays of enmity, beatings, and efforts to tear each other in pieces; while in the streets and lanes are committed robberies and depredations. In some hells are mere brothels, which are disgusting to behold, being full of all sorts of filth and excrement. There are also dark forests, in which infernal spirits prowl about like wild beasts, and in which, likewise, are subterraneous caves, into which they flee when they are pursued by others. There also are deserts where all is sterile and sandy; with, in some places, rugged rocks with caverns in them; and in others, huts. Into these desert places, those are cast out from the hells who have suffered the last extremes—chiefly those who, when in the world, were more cunning than others in plotting and contriving artifices and deceit. Their last state is such a life' (587).

Hell, therefore, (it will be seen) is a fiction of the mind in connection with which is represented chiefly the pains of disintegration, irritation and prostration—pains arising directly from disintegration, and indirectly from the malice of others, but to which belong in representation all the pains human nature has experienced; yet, except in combinations in new forms of past painful experiences, do not go beyond the limits of experience, and whose pains are all resolvable into the primary pains.

§ 83. The fact that the pleasures of heaven and the pains of hell are representative and ideal, is still further evident from the consideration that heaven is supposably free from pain, and hell free from pleasure, whereas many experiences that are ascribed to a heavenly life would not only allow pain, but logically imply and necessitate it, and many of the experiences attributed to hell carry with them of necessity equally pleasures, and the only explanation of the absence in the idea in the one case of pain, and in the other pleasure, is to be found in the recognition of the circumstance that the pain and pleasure have in the respective instances been abstracted, and, by the power of constructive redintegration, the experiences represented without them. For instance, in the contrasted pleasures of rest and motion, illustrated in the Paradise and before quoted (p. 431), the sweetness of the rest is spoken of as following prolonged and rapid motion, implying that the pleasure of the repose is in proportion to the fatigue of motion, yet in theory we are asked to believe that there is no pain in any experience in heaven whatever. Again both Dante and Swedenborg describe the inhabitants of hell as taking *delight* in discord, bickerings, and violence, whereas at the outset we assume that there can be no pleasure in hell. Probably, the safest statement would be that heaven is a place where generally happiness prevails; and hell is a place where generally pain rules. Such a statement would embody more nearly the fact in regard to our belief. The fiction by which all pain is excluded from the one place, and all pleasure from the other, will not bear analysis, for we cannot appreciate pleasure except by pain and the converse, and the ideas we have of a future world are, as has been seen, nothing but constructive representations of earthly experience.[1]

CHAPTER LXIII.

HAPPINESS.

§ 1. A PERSON is said to be happy when his state is on the whole a pleasurable one. He may have pains, but if the pleasure outweighs and overbalances the pain, he is happy. And this is true irrespective of the objects which bring pleasure and pain and of the kinds of pleasure and pain. A man may be enjoying a very strong presentative pleasure, or one which is ordinarily very strong, and yet the representative pains of evil associations attached to that pleasure may be so powerful as to nullify the pleasure and make the state one of pain. A woman may submit to an act naturally pleasurable, but her sense of shame and degradation may be so powerful as to turn the delight into misery. On the other hand, persons afflicted with the presentative pains of disease may be so filled with representative pleasures as to give little heed to their wretched condition, as to be in truth happy and not wretched. When from any cause, presentative pleasure or representative, the pleasure is superior to the pain, the individual is happy.

§ 2. Happiness is relative; we are more happy at some times than at others. We can recall states when the happiness was so absorbing as to obliterate all present pain; by the comparison with these less complete joy seems misery. We can also recall states when the wretchedness was so overpowering as to destroy all happiness, as it seemed; in comparison with such experiences, a moderate degree of joy receives a higher character.

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[1] I am not at all satisfied with my treatment of Pleasures and Pains, yet in the classification I have followed I am persuaded I have at least struck upon the right method of studying and arranging the integrations of feeling. It seems to me a more minute subdivision might be made into degrees of representativeness, and that it is possible to define pleasures and pains more clearly than I have done. The vagueness of the limits between the secondary and tertiary especially annoys me. Still I have decided to publish what I have written, without waiting for any modifications which possibly further study might give. Whatever my deficiencies are, I am sure others, more competent than I, will be found to correct and supplement them.

§ 3. Happiness is indissolubly connected with the objects which cause happiness. The cognition of those objects accompanies the feeling; and reproduction of past happiness involves recognition of the circumstances of the happiness. We associate happiness, therefore, with certain objects, acts, or surroundings, which serve to fix and render definite the pleasure felt. We are happy in walking or eating, in remembering past experiences; or in the society of some friend; without a representation of those objects or circumstances, we should not know that we have been happy or can be again.

§ 4. The conditions of happiness may be variously named according as they are viewed in their more general or more special aspects. A prime condition seems to be abundant functional vitality, and this depends upon unimpaired structure and unimpeded function in the organism. Accordingly, health is probably the chief requisite for happiness. There may be, however, great nervous vitality where the general health is poor, and happiness often subsists in the midst of ill health; but in such case the invalid would not hesitate to say that if his health were better his happiness would be greatly increased. Of course, in measuring happiness by health, we must not fail to take account of the apparent reactive influence of mind upon the health of the body. Representative pleasures of all sorts stimulate, and representative pains of every kind depress the physical energies. Therefore as a condition of health all those things which tend to secure health may be ranked among the conditions of happiness.

§ 5. All of the primary pleasures and most of the groups of tertiary which I have treated here in this work may be regarded as important conditions of happiness. Happiness subsists only where there is a natural gratification of natural appetites. Unless man can eat, drink, breathe, rest and move, he is not happy. The same thing may be said of other appetites. And proceeding from these primary pleasures are the larger representative clusters whose names mark important aggregations of happiness-producing experiences. There must be some degree of health, some of knowledge, some of power, some of skill, some of wealth, some of reputation, some of social order, that man may be happy. And these congeries of pleasures are so interconnected and interfused that one cannot be singled out as in any wise conditional for the others.

§ 6. The most general expression of the conditions of happiness, and to my mind the best statement of that which is conditional for happiness, is the adaptation of the individual organisation to its environment. In the proportion that this adaptation is perfect the happiness is complete; in the proportion that it is imperfect the happiness is incomplete. Where there is an ill-adjustment, vitality is all the time lessened and abated; where there is the opposite condition, the flood of vitality rises.

§ 7. Happiness depends very largely upon the more representative pleasures. Reproductions of past pleasurable experiences constitute a large share of the individual's happiness; and especially those associations which result in anticipated pleasures. The force of anticipation has always been acknowledged in estimating pleasure and pain. A great part of the comfort of life is derived from the plans we lay, the projects we form, the hopes we indulge in. When an expected pleasure is cut off, and an incipient or well-nurtured hope blasted or frustrated, the disappointment is keen, and a vast amount of vitality depressed and dissipated. Sometimes the loss of life itself is a very direct consequence of the bitterness of ruined hopes and prospects.

§ 8. Happiness is largely controllable by education. A person may be educated to draw his happiness from remote and complex representations which are entirely foreign to and inconsistent with his surroundings; in which case he is engaged in a continuous conflict with his circumstances. The mal-adjustment of his organism to its environment creates disturbance, pain, and unhappiness. On the other hand, he may be educated to content himself with the life amidst which he is placed, and to adjust himself to his circumstances; in which case there is a more even flow of happiness for him. Certain habits which experience has shown to be advantageous may be inculcated, and happiness secured thereby; other habits of a deleterious character may be guarded against. Much too depends upon the ends of attainment which are set before the mind; these we shall discuss in a succeeding chapter. The progress of civilisation has been in the main a progress in the art of cultivating happiness; and its last and highest achievement will be making plain the way for each individual to obtain a maximum of happiness. To this end education will direct itself; the most perfect education will be that which best secures such a result. Of course, since circumstances vary, the same education does not accomplish the same things for every one. It has to be different for different times and places. Unless there should be a complete uniformity of constitution and external circumstances, it would be folly to apply any one method of education to all. By this fact the difficulty of the problem is very greatly increased. In order to educate well we must understand the circumstances and their probable variations, and know how to secure an adaptation to them.

§ 9. It will be recollected that we distinguished feelings with respect to quantity, according to their degree of intensity, their pervasiveness, and their duration. It is of much consequence to consider these factors in estimating happiness. There is a kind of happiness which is characteristically intense and ecstatic, such as is exemplified in the sexual pleasure; another which is pervasive and not intense, as the satisfaction felt after a good meal. There is happiness of short duration like that first mentioned; again, there is a long-continued happiness like that resulting from the social presence of a beloved being. There are moments of happiness, hours of happiness, days of happiness, and years of happiness. The element of duration in pleasure is the most important; for with the term happiness we ordinarily cover long periods of time, when we speak of it as our end of existence and action. The greatest amount of happiness within a like time is the object of effort. It is a fact conceded by all observers that intensity of pleasure is apt to be followed by greater depression, and is always prejudicial to continuance of pervasive happiness. 'To aim at a constant succession of high and vivid sensations of pleasure is an idea of happiness perfectly chimerical. Calm and temperate enjoyment is the utmost that is allotted to man. Beyond this we struggle in vain to raise our state; and in fact depress our joys by endeavouring to heighten them.'[1] Of similar import is the following: 'Les plaisirs ne sont pas assez solides pour souffrir qu'on les approfondisse; il ne faut que les effleurer; ils ressemblent à ces terres marécageuses sur lesquelles on est obligé de courir légèrement sans y arrêter jamais le pied.'

'Pleasures are not of such a solid nature that we can dive into them; we must merely skim over them; they resemble those boggy lands over which we must run lightly without stopping to put down our feet.'[2]

§ 10. Allied with the idea of a continued is that of a continuous happiness. The irruptions and interruptions of pain we avoid as much as possible. A regular unimpeded flow of happiness is highly desirable. The occasional sicknesses, the jars, the roughness and minor unpleasantnesses of life are all shunned. Our customary enjoyments without interruption or annoyance are sought after and preserved with care.

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[1] Hugh Blair.

[2] Fontenelle.

§ 11. Having secured a continuance and continuity of happiness, the item of intensity receives its place in attention. He who seeks intensity at the expense of continuance and continuity, is playing a losing game; but having a hold on the latter, the greater degree of the former arrived at is so much additional gain. It is in the variations of intensity that we best appreciate the differences between pleasure and pain, as well as the differences between pleasures and those between pains *inter sese.* And, as has been before remarked more than once, a higher degree of intensity is reached, if there be some prior pain. 'Toil leads to pleasure.' The delights of alimentation are best appreciated after a period during which they have been impossible, as after a fever. Rest is most delightful after exercise; exercise most exhilarating after repose. Wealth is best enjoyed after poverty.

Intensity in happiness is also promoted by novelty and variety in the objects which give pleasure.

'Voluptates commendat rarior usus.'
'Our very sports by repetition tire,
But rare delight breeds ever new desire.'[1]

'He used to maintain that none but pleasures of rare occurrence were really prized by men, that neither young nor old could set a due value on blessings which they tasted every day.'[2]

'Variety's the source of joy below,
From which still fresh revolving pleasures flow;
In books and love the mind one end pursues,
And only change the expiring flame renews.'[3]

'Youth loves and lives on change,
Till the soul sighs for sameness; which at last
Becomes variety, and takes its place.'[4]

'Of all the passions that possess mankind,
The love of novelty rules most the mind.'[5]

§ 12. It may be well to repeat, before closing this chapter, an observation hitherto made in regard to the sum total of any one individual's happiness as compared with his unhappiness. The misery and wretchedness of some lives makes it seem as if the aggregate of pain in the lives of a portion of the human race is greater than that of pleasure. Yet considering the rise and fall of pleasure to be coincident with the rise and fall of vitality, it is easy to see that pleasure is linked with existence itself and while there is life there is some pleasure. And there cannot remain for a very great while a preponderance of pain over pleasure without extinguishing life. This being the case, during a lifetime unquestionably the aggregate of pleasure must be greatly in excess of that of pain. Disease and care may depress the vitality, but if the vital functions are performed in the regular course of nature, there is happiness sufficient to overbalance whatever pain is experienced. As compared with the lot of others some lives are relatively unhappy. That is the only sense in which we can speak of unhappy lives; it is not true that in such cases there has been through life a greater amount of pain than of pleasure. Euripides has expressed the true state of the facts in the following passage:—

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[1] Juvenal, Sat. XI. [2] Goethe, *Wilhelm Meister.* [3] Gay. [4] Bailey, *Festus.* [5] Foote.

> 'Warmly this argument with others oft
> Have I disputed, who assert that ill
> To mortal man assigned outweighs the good.
> Far otherwise, I deem that good is dealt
> To man in larger portions; were it not
> We could not bear the light of life.'[1]

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[1] Supp. 195.

PART IX.

VOLITIONAL AND ULTIMATE INTEGRATIONS.

'To desire, it is essential that the object appear to us *good*—or rather, to appear to us good, and to appear to us desirable, are truly the same thing. If all things had been uniformly indifferent to all mankind, it is evident that they could not have formed any classes of things as good or evil. What we do not desire may be conceived by us to be good, relatively to others who desire it, but cannot seem to be good relatively to us.'

'As it is not the love or preservation of life, which is unworthy of a true and honourable man, but the love of a life that is inconsistent with nobler objects of desire; it is, in like manner, not the love of pleasure which is unworthy of us—for pleasure, in itself, when arising from a pure source, is truly as pure as the source from which it flows; but the love of pleasure that is inconsistent with our moral excellence. The delight which virtue gives, and which devotion gives, is no small part of the excellence even of qualities so noble as devotion and virtue. . . . . We must love pleasure if we love whatever is worthy of being loved.'—Dr. Thomas Brown, *Phil. of the Human Mind*, Bk. I. Part IV. Chap IV.

CHAPTER LXIV.

ENDS.

§ 1. IN another place we have traced the formation and growth of volition, and in the course of that study have had occasion to notice ends and the part they play in the volitional exercises. Recurring to a former chapter (Chap. XLVI. § 1), we shall find a definition for which we again have use: 'A motive is that which moves mental energy, considered merely as the cause which sets it in motion; an end is that which is expected to satisfy energy.' It will be necessary now to consider a little more explicitly and carefully the distinction here made. In our previous studies we have seen that volition has at its foundation a dynamic element of energy or power, which is put forth upon occasion. A motive is that which sets this energy in motion, wholly irrespective of results; anything that moves the volitional power is a motive. Now psychological analysis shows that this power is consciously put forth always and only in connection with feeling. Sometimes the feeling is pleasurable, sometimes painful. When it is pleasurable the attention is held, and then the energy is increased and flows more abundantly in the same direction in which it is started; when the feeling is painful the energy, though first stimulated, is presently diminished in quantity and diverted into other directions. The manner in which, by force of association, volitional energy is determined in one direction rather than another, and choice and volition proper arise, has been already narrated and need not be reconsidered here. But whether the selective element of volition is prominent or not, in both the earlier puttings-forth of energy and the more complex and compound volitional movements, the motive of energy, so far as it is conscious, is a pleasure or a pain, that is, a pleasurable or painful feeling. When the nervous vitality is high and the feeling of pleasure is abundant, activity is stimulated outward in all directions. A presentative pleasure engrosses the attention and stimulates energy along the line upon which its expenditure brought pleasure; in that direction an increase of the pleasure is sought. A representative pleasure reproduces the volitional movement which attended its original, and on its presentative side starts the volitional current in the same course as before. In like manner a presentative pain excites action away from or in avoidance of the pain; a representative pain, on its presentative side as an actual present pain (though fainter than its original), does the same.

§ 2. A motive, then, is a present feeling, involving more or less pain or exigence—not necessarily a feeling characteristically presentative, but at least the presentative side of a representative feeling. Now when we superadd the representative side, we have the elements of an end. A pleasure is experienced; its continuance is desired; associations cement themselves around it. So long as it continues no act of will takes place, but as soon as it abates or departs a want is felt, there is a representation of the pleasure and its attendant cognitions; there are suggested the actions which originally brought on the pleasure, and the current of volition is started in the direction which promises to repeat the experience. The reproduction of the pleasure in fainter degree, together with the felt insufficiency of that pleasure, is the motive, the presentative side of the representative feeling; the knowledge that the feeling is but representative, and the desire to realise that original pleasure with the expectation that it will be realised and repeated, makes the end. A pleasurable feeling, not present in its completeness, but sought as the expected satisfaction of the volitional energy, is an end, Motives may be any feelings whatever which are present and involve some degree of pain or the want of something; ends are only representative pleasurable feelings.

§ 3. All pleasures, then, may be ends. We have found a pleasurable feeling, it will be remembered, to be one whose continuance is desired, and to obtain which action will take place. Every pleasure must be to some one and at some time an end, else it would not be a pleasure. A catalogue of pleasures would be exactly coincident with a catalogue of ends. On the side of feeling we call an experience a pleasure which, on the side of volition, we call an end. So far as our exposition of pleasures is complete, it is also complete with reference to ends.

§ 4. After having observed that in their psychological constitution all ends are representative feelings, we may, without confusion of meaning, understand how, following the divisions of pleasures and pains, ends are divisible into Real or Presentative and Ideal or Representative Ends. The object desired may be either a presentative pleasure, as that of eating, or seeing a landscape, or it may be a representative pleasure, as that of wealth or fame. Considered from this standpoint, the force of such an arrangement is evident.

§ 5. So also, ends may be divided into Sensational and Emotional, the former being sensational pleasures and the latter emotional. Again, ends may be regarded as Egoistic, Ego-Altruistic and Altruistic, in the same manner as pleasures are. Still further following the classifications of pleasures, we may group ends as Primary, Secondary, and Tertiary, the divisions corresponding precisely with the similarly-named classes described in the preceding pages. In view, however, of the methods of classification soon to follow, the last one should be used with caution, for, if employed carelessly, confusion will be likely to result. The terms Primary, Secondary, and Tertiary should, perhaps, be confined to pleasures and pains.

§ 6. Ends may be either Self-sufficient or Intermediate. A self-sufficient end is that which the agent seeks for its own sake; what he values and takes pleasure in for itself alone, and not as a means to some other end; as when a man seeks and eats vegetables for the delight of eating them, and not on account of any resultant advantage therefrom. An Intermediate end, on the other hand, is one which is made the stepping-stone to a further end, as when a person seeks vegetables and enjoys eating them because of their anti-scorbutic effects on his system, or because his health generally will be improved thereby.

§ 7. Some ends are intermediate not only as they extend to a self-sufficient end, but also to another end which is itself but intermediate. There may be a succession or chain of many intermediate ends, one dependent on another, one sought for another, before anything is arrived at which is sought for its own sake; as when a man sells a garment to get money, to buy tools, to till his lands, to obtain a crop, to supply him with food, to gratify his appetite. Here let it be supposed that he seeks to gratify his appetite on its own account with no ulterior end; the end of his selling his garment to get money is only an intermediate end, and it is not only subordinate to the self-sufficient end of gratifying his appetite, but also to the nearer end, intermediate as well, of buying husbandry tools; and obtaining these is still an intermediate end, being only for the sake of tilling land. And the tillage of land is an end not sought on its own account but for the sake of the crop produced, and the crop produced is an end sought only for the sake of making bread, and bread is sought for the sake of gratifying appetite. Of course these chains may be long or short; the finally self-sufficient end may be sought at once or through a series of intermediate ends.

§ 8. But many ends seem to be both self-sufficient and intermediate. In the example given tilling the land may be a self-sufficient end in the pleasure of exercise which it affords, while also occupying the intermediate position it does in the above series. A man may love a woman for her own sake and also for the benefits in the way of care and assistance which she may bring him. Such ends as these may be termed Mixed Ends.[1]

§ 9. In the progress of the development of intelligence ends are all the time passing from the class of self-sufficient into that of intermediate. A thing is sought for its own sake at first, but soon associations gather around it and it is itself drawn to other and new groups of associations, until a new end is revealed to which the other becomes at once subsidiary. A man drinks a wine and repeats the draught because he likes the taste; the latter is a self-sufficient end to him: but presently he discovers an agreeable after-effect, and immediately the taste becomes only an intermediate end to that effect, or at any rate a mixed end. As knowledge enlarges its bounds, the uses of things are multiplied, and that which was the limit becomes only a way mark.

§ 10. On the other hand, when an end is sought, the means to attaining which is repeated action in a given direction, it frequently happens that the means becomes a self-sufficient end. This has been illustrated several times in some of the last chapters. The greed for gold for its own sake is an example; also occupation in a profession, business, or handicraft. Gold comes to be valued for itself, not for what it will buy, and work is appreciated *as work* and not for its results.

§ 11. Ends may be further classified as Principal or Superior, and Subordinate or Inferior. A principal end is a self-sufficient end which concentrates and engrosses a relatively large amount of attention and desire, the comparison being made in respect to a given period; all other ends are considered as and embraced under the name of subordinate or inferior. The latter class would include all intermediate ends, so far forth as they are intermediate and the inferior self-sufficient ends. Mixed ends may be regarded as principal or subordinate according as they engross attention and desire, and according as their self-sufficient side or their intermediate side is prominent. A Supreme end is one which above all others is self-sufficient and engrossing.

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[1] Cf. Jona Edwards, *Dissertation on the End for which God created the World.*

CHAPTER LXV.

DISPOSITIONS.

§ 1. IF the associations of cognitions are rendered more firm by repetition of them, there is an increase of strength to the volitional determinations, which attend those associations. And as by the laws of redintegration, there is a tendency toward repetition of experiences, so it follows that there is a tendency to repetition of the volitions which attend those experiences, since representation is not merely representation of the cognition, but of the entire mental state including the feelings and volitions. Volitions tend to repeat themselves; having increasing force and certainty with each repetition. The law of habit is well-established. Volition seems to cut out for itself channels by repeated movement in the same direction; by increase of quantity of power these channels are rendered deeper and the volitional currents flow in them the more easily, being able only with the greatest difficulty, after a time, to travel in new courses that are not ramifications of their old ones. This tendency of the mind, thus formed, to move volitionally in a given direction is a Disposition.

§ 2. Volition, strictly, does not produce anything but volitions. Seeing, however, that volitions are repeated and reproduced, the intellectual faculties surveying mental phenomena identify and recognise volitions by the associations, group them together in certain relations, and from the fact that they do recur repeatedly infer an aptitude for recurrence. And since volition is the putting forth of energy, and energy, if put forth, must go in some direction, a series of the same or similar volitions reproduced determines that direction, and the mind is said to be *disposed* that way. It is inferred that because under certain circumstances the selection has been made in one way, on a recurrence of those circumstances the same selection will be made. Thus dispositions toward ends may be esteemed products of volition, the remark before made with respect to feelings and the necessity of using cognitions in making a science of feelings having equal application here. In classifying volitions and the products of volition we are classifying representative cognitions regarding volition. That which we have noted as a disposition to an end, seems to be the principal and the natural product of volition, when we thus intellectually survey volition, its courses, and its results. (See Chap. XXXVII. § 19.)

§ 3. A disposition must be toward some end. If the will is inclined it is inclined toward something, and that something is the end of the tendency. To say that I am disposed without being disposed to something, would be an absurdity. Dispositions may exist toward all classes of ends, toward supreme, superior or inferior, toward self-sufficient or intermediate, toward egoistic, ego-altruistic or altruistic, toward sensational or emotional, real or ideal ends. The ends determine the kind or variety of the disposition; dispositions are classified according to their ends.

§ 4. Dispositions may be Concurrent or Coalescent, or, on the other hand, they may be Deterrent or Antagonistic. A disposition may exist toward each of two self-sufficient ends which are quite consistent with each other. A man may be disposed to ride on horseback for the self-sufficient exhilaration he gains thereby; he may also be disposed to row on the river for the same reason; these two dispositions are concurrent. But if either the disposition to ride or to row comes in contact with a disposition to gain health and strength, to which end riding and rowing are but means, the disposition to ride or row coalesces with the higher disposition. Wherever there is a tendency toward two ends which are intermediate with one more general end, the parallel tendencies to the intermediate ends are concurrent, while the disposition to each intermediate end is coalescent with the more general disposition.

A person may have a disposition toward taking his horseback ride at eight o'clock in the morning; he may also have a paramount disposition to study in the morning hours, and he finds after a while that his ride encroaches on his study hours or diverts his attention from his study. He feels then his disposition to ride at that hour modified somewhat; with reference to that disposition his disposition to study is a deterrent. The opposition is not pronounced enough to make them strongly antagonistic—indeed, the riding may be favourable to the study, and if the hour of one be changed the two would not interfere at all; but in the condition supposed, the disposition to study abates the other. If now the disposition for riding is strong and absorbing and that for study is also strong, and the gratification of each demands time that is necessary to the other, so that a sacrifice must be made of one, we have antagonistic dispositions. Similarly, when one has a disposition toward gaining health in general and a strong disposition to acquire knowledge. The two may conflict and be antagonistic to each other. Again, the disposition toward health and a disposition toward gratifying a craving for intoxicating drinks may be antagonistic; so also a disposition toward acquiring money and acquiring knowledge. Egoistic dispositions are, generally speaking, antagonistic to altruistic.

Deterrent dispositions are really antagonistic; both may be included under the general head of opposed and opposing dispositions, but the term deterrent is useful to mark a disposition which has an effect to restrain or curb another, thought not sufficiently powerful to be an open rival to it. When one disposition overmasters another, still the latter may operate as a check or deterrent.

§ 5. Dispositions vary with regard to their strength. A strong disposition toward a given end may be gauged by the relative force of desire when the pleasure constituting the end is held back. If there is involved in such an event a frequent recurrence of that end in thought, or a persistence and a predominance over other ends when brought into comparison with it, a strong disposition is evinced. When an end is constantly presenting itself as an object of desire, and other ends are becoming means to it, so that the end controls volition towards it, beside which the volitions to other ends are weak and infrequent, there is said to be a strong disposition toward such an end. In the formation of such a disposition the chief constituents are repetition and quantity of feeling, which, it will be remembered, are chief causes of organisation of associations. Some dispositions are so strong as to be ineradicable; these occur with inseparable associations. Others are of such a character as to exclude others; with these, in turn, we observe exclusive associations.

§ 6. That dispositions are inherited needs no argument to prove. There are bents in every character, tendencies toward particular ends, of greater or less strength, which are connatural and derived from prior organisations. The element of heredity has been fully considered in former portions of this work.

§ 7. Dispositions are often formed without a full appreciation of their effects. Some of the more intense appetitive pleasures, for example, when too often and in too great degree indulged, are deleterious. Their injurious effects, however, do not follow immediately upon an indulgence, and are frequently a long time developing themselves. Repeated indulgence strengthens the disposition, and the latter becomes not only fully formed but also exceedingly powerful before the harm manifests itself. When that harm is understood a counter-disposition is formed, but frequently inferior to the other, so that the other overmasters it. Men will thus persist in doing that which they know to be injurious to them, because the stronger and older disposition crowds out the newer and weaker. In this way men are seen pursuing pleasures which they know to be hurtful; apparently they are seeking pain, in reality they are following after pleasure, and are unable by the force of exclusive associations and acquired dispositions to connect pain with their course with sufficient adhesiveness of association to replace the former and habitual associations of pleasure. Especially are these remarks applicable to inherited dispositions. There the will runs instinctively in certain directions, the limit of which the possessor does not know. He is utterly ignorant of the ultimate consequences of his actions. All that he is conversant with or cares about is the present gratification. Another sees him rushing to ruin while no suspicion of his danger has crossed his own mind. In like manner the force of inherited dispositions is seen in tendencies toward good results. An inherited disposition towards frugality will show itself in actions adapted to the promotion of such a habit, though the actor have no conscious intention to preserve such a disposition. All the instincts, good and bad, accomplish their work in this manner. The individual is set far in the road toward the accomplishment of an end before he is aware what the end he is seeking is, or that he has any end at all. A person may thus have a disposition without knowing that he has it. Of course he cannot make a choice without knowing that he is choosing, but he may possess a tendency which is working itself out toward results he does not know of, and with a strength of disposition of which he is not aware.

§ 8. Helvetius calls attention to a fact which should be here referred to, namely, the mistakes we make as to our actual dispositions. A person may have a disposition toward some end when he thinks he not only is without it, but even supposes that he has a disposition toward an antagonistic end. Again, having a disposition toward a given end, he may act thinking that he is acting moved by this disposition, when really he is moved by a much stronger disposition, the force of which he does not appreciate. Self-deception is a very common phenomenon. Very conspicuously is this seen in the matter of retaliation. A man slanders you; the natural disposition toward revenge stimulates you toward his punishment; that works upon you and prompts you to some act: on the other hand, a disposition toward forgiveness has its influence; and feared ill-repute, because of showing vindictiveness, hinders. But at that moment a disposition to do acts for the good of the community is touched upon. You recognise that it is expedient that the malevolent should be punished for the sake of the public good, and under cover of this last disposition you proceed to gratify your disposition for vengeance, perhaps honestly supposing you are acting solely or mainly for the public welfare. In religious persecutions many doubtless have supposed they were moved by a disposition to serve God, when in reality they were influenced by predatory passions. Some of the blackest crimes that the world has known of, emanating from cruel and vindictive dispositions, have been committed under the cover of holy and altruistic dispositions. And, not to go so far as crimes, we find in ordinary life people all the time assuming that their pleasure is the pleasure of others, and acting out their own pleasure really, while complacently flattering themselves that they are acting from a disposition to do the will of another.

This self-deception is fully explicable when we come to consider both the force of instinctive dispositions just before alluded to, and also the fact that a knowledge of one's self is attained only in the same way as a knowledge of what is outside of one's self, that is, by observation and experience generally. The mind makes itself the object of study, and only by a careful observation of its operations and comparison of different states and the acts of different minds, can any individual understand fully his motives and dispositions. The importance of the precept, Γνῶθι σαυτὸν, can scarcely be over-estimated.

From what has been said in the preceding and the present section, it will be seen how and in what sense we may act contrary to our wills. We do not really act at all contrary to our wills, but in accordance with our strongest dispositions. We also see how a person may have a disposition without knowing that he has it, and how he may deceive himself as to the motives of his actions.

When a person acts under one disposition, supposing that he is acting under another, but comes to learn the truth, if he then makes a pretence of acting under the one which does not control him, he becomes a *hypocrite*. Often the force of association is so great, that, although he learns the fact of his false pretence, he cannot be persuaded that he has mistaken his disposition, and still continues, spite of his knowledge, to assume in his own mind the same position as before.

§ 9. Dispositions are habits. A habit is an habitual or accustomed action, state, or condition of a sentient being, that is, an action or state frequently repeated. The term is broader than Disposition. A disposition is a mental habit; but the latter name includes as well all habitual action, muscular as well as nervous. A person's physical actions and states, as well as his mental, are habits. Habits are products of vital action; dispositions, of mental action. In treating, therefore, of the products of mental actions, we have no occasion to treat specifically of habits; they are not distinctively mental products. Our thoughts, feelings, and volitions are all, to a greater or less degree, habitual; but so are all our vital states and actions. Thinking is a habit, but so is eating or walking.

§ 10. Like ends, dispositions may be characterised as Supreme, Superior, or Inferior. A supreme disposition is one toward a supreme end, a superior disposition one toward a superior end, and so forth; it is often convenient to apply the name which marks the end to the corresponding disposition as well. Similarly, we may speak of Egoistic, Ego-altruistic, and Altruistic dispositions. The other classifications of ends do not have so pertinent an application to dispositions, but relate more exclusively to ends.

CHAPTER LXVI.

DISPOSITIONS TOWARD PRIMARY PLEASURES AS ENDS.

§ 1. FOR the most part, the dispositions toward primary pleasures as ends are inherited. The primary pleasures are ministers to growth, individual preservation, and reproduction; and the actions which tend to secure those pleasures are in great degree instinctive. Man does not need much education to create a desire for food, and to begin movements to gratify that desire. If a prick of a pin is felt, instinctively the mind moves toward the relief from pain. If one has fever, a fully formed disposition toward a state of health is discovered at once. The central nervous energy expends itself early in outward movements, and a disposition toward movement is organised before we know what movement is. A man is born with such dispositions; they are in his constitution, the fruit and result of repetitions of experiences dating back through generations innumerable; upon the most of them existence depends. Human nature would not be human nature at all without these natural instinctive dispositions.

§ 2. But though these dispositions are instinctive, the subordinate dispositions relating to the way and manner of attaining the primary pleasures are by no means wholly so. My disposition toward the pleasure of eating is instinctive; my disposition toward the muscular movements which give me that pleasure is largely so, but my disposition toward the raising of the wheat, or killing the animal, or picking the fruit which affords me something to eat, may be little, if at all, instinctive. When, however, we pass beyond the subjective pleasure to consider the objects which confer pleasure by their acquisition or possession, or both, we are advancing into the region of secondary pleasures. Yet it is well to note here that while the dispositions toward primary gratifications are instinctive, dispositions toward the intermediate ends to such pleasures are not necessarily so, and in great degree actually are not so, but are acquired, oftentimes with difficulty.

§ 3. In the dispositions toward primary pleasures it happens, therefore, as has been already noted, that the desire exists before it is fully defined, and the individual does not know what is the end of his disposition. The disposition is latent. But when once an experience of the pleasure is had, both the end and the disposition come into the light of intellectual comprehension. A baby will instinctively reach out and make many movements, stimulated by a desire whose full meaning he does not realise. When he reaches the breast and applies his mouth to the nipple and sucks, the want is assuaged; and after a few repetitions he comes to know what the pleasure is, the want of which he feels. In youth the coquettish ways of the young girl, the attentions of the young man, the drawing together of the sexes very often, perhaps usually, take place without a knowledge of the end toward which their dispositions move. After the sexual embrace, however, the disposition and the end are clearly defined and recognised as established with a strength which indicates an inheritance.

§ 4. The strength of dispositions toward primary pleasures will best be understood by considering the effects of deprivation of those pleasures or infliction of the corresponding pains. The most striking illustrations are found in the agonies of starvation or thirst; but equally good examples are suffocation, the suffering from wounds, cold, disease of any sort, sleeplessness or excessive labour. We ordinarily speak of the things which give us the primary pleasures as necessaries of life. They are so necessary that we cannot do without them and live. Accordingly we find the greatest power of disposition toward these pleasures. There is, however, a difference in this respect between primary pleasures as ends. Those which relate to the growth and preservation of the individual are more imperative than those which have reference to reproduction. Strong as the latter are, they are generally speaking subordinate to the appetitive cravings experienced by and concerning self. Yet it must not be forgotten that the preservation of offspring is not infrequently made a matter of chief importance by the parent when even the latter's life is in jeopardy. But setting aside parental love, the dispositions toward sexual and social pleasures are less strong than those toward the other primary enjoyments.

§ 5. While every end is a pleasure, it must not be forgotten that every pleasure is not actually an end (though it may become such), but only representative pleasures are ends. That which we are enjoying satisfies us and is not the subject of expectation. When the joy abates and we represent it, then that pleasure becomes an end. We do not desire that which is present, but that which is absent. Hence the primary pleasures, so far forth as they are presentative, are not ends; of course, since they are not purely presentative, and since being intermittent, they are susceptible of representation, practically they are ends, but in the degree that they approach the presentative they lose their character as ends. The real pleasures of respiration, for instance, are so continuously enjoyed that there is no appreciable time when they are not being experienced. They are but little desired therefore; that is to say, desire toward them is very little experienced because they are always present; hence they do not enter into the category of ends to any great extent—we are not obliged to think about them. But when we hold our breath, or are immersed in a foul atmosphere, or are choked by external pressure, we feel the full force of desire toward these pleasures, and they rise at once into the position of a prominent end. Now, with most of the primary pleasures a similar course of things is noticeable. The means for gratifying these fundamental appetites are so abundant, so much within reach, that desire is followed by gratification with certainty and with little difficulty. Movement and exercise are almost as constant and unremittent as respiration; repletion ordinarily and with most hardly less so; so that there is little effort required to obtain these pleasures and not much opportunity for strength of desire, and hence they do not appear as ends to as engrossing an extent as those pleasures which are less easy to get, and which are consequently desired more. When, however, from any cause there is a deprivation of the accustomed delights, the intensity of desire is far greater than toward any other pleasures; they become more absorbing ends than any others do, and the strength of disposition manifested toward them is greater than toward any others.

§ 6. The intervals between the enjoyments of the primary pleasures are sometimes long enough, and the obstructions to their gratification are certainly sufficiently numerous, to make men recognise them as ends of great importance. We know the misery of losing them too well to forget their value; they are actually in our mental constitution ends toward which we have strong dispositions. But yet on the whole they are experienced with such regularity of recurrence, with such a tolerable degree of certainty, that the mind mechanically moves to procure them, as the hand to pick up objects lying in profusion within reach. Feeling sure of them then, they become but stepping-stones to other pleasures which are not so easy of realisation. They become, in other words, intermediate ends. I am not solicitous about my dinner; it does not occupy my thoughts predominantly as an end of desire. I think of it, I calculate upon it, I go to eat it, but with the thought that by so doing I shall gain strength for my afternoon's work. The pleasure of eating becomes a means to other pleasures. So with our other primary pleasures. As they are abundantly enjoyed they are intermediate ends. But if a man is put to much trouble to get his dinner, if he is not secure of it from day to day, if he has to strive and battle for his food, the pleasure of eating becomes an end self-sufficient and absorbing. In general terms, the lower civilisation is, the less the resources of the individual, the more the primary pleasures are self-sufficient. As social progress is made, as intelligence and culture grow, the more they become intermediate. The more secure the enjoyment of them, the more they stand as intermediate; the more precarious their satisfaction, the more certainly do they occupy the mind as self-sufficient ends. Our primary pleasures are primary basic ends; we must have them at all events, but having and enjoying them freely and in security, we make them intermediate to delights which are representations and variations of them.

§ 7. It will thus be seen that with respect to other ends primary pleasures may sometimes be principal and sometimes subordinate. It will also be seen under what sort of circumstances respectively they are the one and the other. Where they are within reach, and the individual is reasonably sure of obtaining them as his needs call for them, they become ends subordinate to others formed by representation and association: when they are hard to secure, and the person is thwarted or interfered with so as to be uncertain respecting his enjoyment of them, they approach the category of principal ends. In the higher civilisations they are more generally intermediate ends; in the lower more generally principal. The less we are obliged to think about them the more completely are they intermediate.

It is not alone the case, however, that deprivation of the primary pleasures raises their character as ends. In abundance, the mind may be led to dwell upon primary delights, to refine them, idealise them, and make them principal ends. The gourmand may make the pleasures of eating a principal end of volition; the lustful man may have his mind similarly pervaded; the indolent man furnishes another example. In all of these cases, associations have become fixed upon some one set of primary pleasures, or two or three sets (wine, women, and repose are apt to be closely associated), and all other ends sink into insignificance beside them. They are self-sufficient ends, and more than that, self-sufficient ends which engross the attention and desire to a very high degree. Equally with the very indigent man the glutton makes the pleasure of eating a principal end, though under very different circumstances. The glutton, however, specialises and idealises. It is not the generic pleasure of repletion that he seeks; it is the refinements of the pleasures of taste with which repletion is associated. He makes his end the ideal pleasures of repletion; the other has his disposition toward the presentative repletion itself as the end: they both make a primary pleasure the principal end; but one desires a complex representative primary pleasure, the other desires a presentative primary pleasure. This seems to be the difference between those who pursue primary pleasures from a natural appetitive craving and those who are stimulated by an artificial appetite.

Nor is it the case that the person who follows the promptings of basic appetites to excess is the only one of those above the first class spoken of who makes the primary pleasures principal ends. Those who have come to value the present pleasures as the only pleasures certain and substantial may make the enjoyment of those delights principal ends, toward which all else is subordinate. So may those who recognise the fact that all pleasures are based upon and are representations of primary pleasures; such persons resolve the more complex pleasures into the primary, and only make the former means to the latter.

In fine, whether the primary pleasures are principal or subordinate ends with a given individual for the whole or a portion of his life, or whether some are principal and some subordinate depends upon inheritance and association, and is governed by their laws. The comparative value of ends is a matter reserved for further discussion in a later chapter.

§ 8. As related to each other primary pleasures are both ends and means. Each one of these pleasures may occupy the position of an end to each of the others; and on the other hand each one may be intermediate to one or more of the others. This is even true of those pleasures which are frequently antagonistic. Society, for instance, is often a means to alimentation, and a good bodily condition is quite necessary oftentimes to the obtaining and enjoying the pleasures of society. Exercise and repose are quite opposed to each other, and yet we must have exercise in order that repose may be of any value, and conversely. The interdependence of pleasures, of which we have previously treated, illustrates also the inter-connection of ends.

§ 9. Dispositions toward primary ends are often antagonistic. The antagonism is especially marked between egoistic and altruistic dispositions. The social and the alimentative pleasures are strongly antagonistic. There is also antagonism between dispositions toward exercise and those toward repose. Indeed since, as we have seen, with every set of primary pleasures there are associated pains, the idea of relief from those pains will create deterrent dispositions, so that every disposition toward primary ends may have its deterrents. In the same measure as the close interdependence of pleasures carries with it a mutual connection of ends and concurrence of disposition, so the constant association of pleasures and pains implies a mutual opposition of ends, and greater or less antagonism of dispositions. Where a disposition toward one set of pleasures is cultivated to the damage of another set, we witness an opposition varying in degree according to circumstances.

§ 10. Dispositions toward bodily integrity are formed by experiences of disintegration. Men are born, generally speaking, with a whole skin, and it is the pain of impinging disintegrating forces that awakens and develops the disposition to preserve one's self intact. The child soon learns to avoid bruises and cuts—a burnt child dreads the fire—and that which is instinctive and latent, by painful experiences is brought out into prominence. The instinctive element in these dispositions is probably larger than in any other set, though, in the matter of specific methods of securing the end sought and avoiding the opposite pain, the instinct is much inferior to that possessed by some of the lower animals. In man there is a powerful instinctive disposition to avoid disintegration, but learning the means of avoiding it is a somewhat slow process. Closely allied with these dispositions are those toward high vitality. Function and structure are interdependent, and the pleasures of high vitality are not attainable without unimpaired structure. If a person is whole he is apt to be well, and if he is not well he does not remain whole very long. Pleasures of movement are conspicuous associates of pleasures of integrity. Locomotion and exercise generally cannot be enjoyed when there is disease present; usually are not practicable at all under such circumstances. Of course all the other primary pleasures are in greater or less degree associated with the ones now under consideration, but those just mentioned are the most obviously and directly so.

Yet, on the other hand, dispositions toward movement and exercise frequently run counter to those toward integrity. The buoyant, athletic youth, fond of the open air and valuing rough sports, will prize his exercises more than his personal security, and will pursue his sports to the utter disregard of consequences; bruises, lacerations, and even broken limbs will scarcely be taken into account in his heedlessness. The pleasures of society are another class often brought into opposed relations to the first class of primary ends. Dispositions toward the welfare of another not unfrequently outweigh egoistic ends, and countervail dispositions even toward bodily integrity. Likewise, alimentative and sexual ends are sometimes found so overpowering as to compel their pursuit even in the face of imminent personal danger of life and limbs.

The pleasures of integrity do not in the majority of cases occupy much attention nor engross much desire, since the larger portion of men enjoy them and they do not have to be sought. They are hence usually subordinate ends and intermediate to pleasures beyond the primary. When, however, they are impaired a tremendous strength of disposition toward their recovery and restoration is always exhibited; the whole force of volition is at once turned to the avoidance of those pains which quench and destroy them.

§ 11. Dispositions toward the pleasures of light and heat bear an intimate relationship to those of functional vitality; also to the class of dispositions just adverted to. The pleasure of heat is connatural and the disposition toward warmth as an end noticeably instinctive, though not in as marked a degree as the dispositions toward bodily integrity. In addition to integrity, dispositions toward repose and toward sexual pleasures are prominent associates, also those toward movement and exercise requiring light. The connection of sexuality and repose is close, and warmth and sexuality are intimately allied. The dispositions of the present class run against the dispositions toward bodily integrity, when in a too eager pursuit of the former, the destructive powers of light and heat manifest themselves. They sometimes encounter dispositions toward movement and exercise in so far as the former are concurrent with repose. They are sometimes anti-social, as is seen when one desires the social activity of winter as against the dulness of the heat of summer. The alternations of temperature and the consequent absence of heat bring its pleasures more prominently before the mind, and create desires stimulating action to realise the end craved. Hence warmth and heat appear more considerably as ends of action in the mental history of most, than the pleasures last adverted to. But these ends are seldom of the class of the self-sufficient; they appear generally as intermediate. The pleasures of light, however, as they are represented and refined become highly æsthetic, and among them we discover an abundance of self-sufficient ends. The contemplation of a beautiful landscape, a sunset, a painting or a statue, affords pleasures out of which grow self-sufficient ends. These however, together with the pleasures of heat, must be relegated to the general division of subordinate rather than principal ends.

§ 12. Passing now to that class of primary ends marked by the term respiration, there will be observed, as recently noticed, a frequent and regular recurrence of pleasures; and it is seldom we are deprived of them. The dispositions toward them are wholly instinctive, and inasmuch as their enjoyment is so little interrupted are not made the object of much desire. As ends they are uniformly intermediate and subordinate. The dispositions running concurrently with them are most especially those toward functional integrity and those toward movement and exercise. Normally there are no dispositions which are in opposition: there are occasional antagonisms however, as when in eager pursuit there is shortness of breath, or when for the sake of some ideal advantage a person voluntarily goes into rarefied or foul air.

§ 13. The pleasures of movement and exercise and those of repose exhibit in a marked manner a curious opposition and interdependence. Regarded as ends, they both show instinctive dispositions to a great extent; yet since they alternate with each other, and each may be absent for a considerable time without destroying life, and since neither is uninterruptedly necessary to existence, there is room for the frequent manifestation of desire toward each of them. The opportunities for gratifying these appetites are not so abundant as in the case of heat and respiration, and the want of them is therefore more often felt. Of the two sets of pleasures, those of movement can ordinarily be obtained with a little more regularity and certainty than those of repose; absolute restraint of movement is not common while there are many and frequent situations where repose cannot be enjoyed when desired. In play, the pleasures of movements are ends in themselves; in work they are intermediate, though work itself may become play from the force of long practice, in which case that which was intermediate becomes also self-sufficient. We sometimes find forms of activity becoming principal ends, but usually only when associated with some other ends. The pleasures of repose, in more or less high degrees of representation, are frequently ends in themselves; or again, they are often intermediate, as when a tired man thinks of rest in order that thereby he may renew his strength for work on the morrow. A large complex of ends in which there is a combination of various pleasures, but of which rest is the prevailing constituent, frequently becomes principal under such descriptions as peace, content, quiet. Movement has for its adjuvants, conspicuously, integrity, heat, respiration, yet in their turn dispositions toward all these ends may be found as antagonistic; repose is prominently so, and repletion when in process of being enjoyed; when desired, the latter is a powerful stimulus to activity. Dispositions toward repose, society, alimentation, and sexuality, seem to run together; nevertheless they may under some circumstances become antagonistic or deterrent. Movement and repose, as regards the matter of opposition and concurrence, are types of all the primary pleasures, and indeed of all pleasures whatsoever. Dispositions toward any two sets of pleasures will be found sometimes assisting and sometimes resisting each other, as circumstances vary.

§ 14. Probably in connection with the alimentary appetite we have the most prominent exhibitions of desire. Food and drink are so necessary at periodic times, and yet often so difficult to obtain, that the desire for them is engrossing. The pleasures of repletion represent the pleasures of possession; those of movement the pleasures of acquisition. Alternately, repletion is an end in itself and a means to an end. Repletion gives strength for more work, and work produces that which brings repletion. With some, as already said, the latter is a principal end; with the most it can hardly be called so. The prominent dispositions in alliance with dispositions toward these pleasures are those toward vitality, repose, society, and sexuality; those connected with activity and movement are most apt to be antagonistic.

§ 15. Ends of sexuality likewise take their place among pleasures of possession most prominently. These ends are very like those last considered, with this difference, that the latter are for the most part more characteristically egoistic, the sexual more altruistic. Like the ends of repletion, the ends of sexuality very largely engross attention and desire; these desires are also periodic, and not altogether easy of gratification. They cannot be satisfied as one satisfies the appetite for air by breathing it in. They are ends of activity and are ends in themselves; they are also means to society and to vitality and even to activity, lessening as they do the sluggishness of the system. On the other hand, they are opposed to vitality because their enjoyment lessens vitality; to heat for the same reason; to activity because they are best satisfied in repose and quiet. Combined with society, they form principal ends, and some times are to be ranked as such when by themselves considered.

§ 16. Ends of society frequently are found to engross a large amount of attention and desire, and not merely as intermediate but also as self-sufficient ends. Most all principal ends have ends of society entering into them largely as an ingredient, and some consist almost wholly of such ends. Ends of society are, as regards self-sufficiency and intermediateness, about equally balanced. Dispositions toward society are ordinarily concurrent with those toward sexuality and with those toward repose. By far the most prominent opposing dispositions are those connected with repletion, that is, with the alimentary ends. Upon the whole, ends of society appear most conspicuous as representative pleasures and as ingredients in the larger masses of compound pleasures. The frequent combination with sexuality has been spoken of; the family pleasures are the main instances. Another group of social ends is that group described by the term 'love of country;' another that indicated by the term 'fame.'

§ 17. After the full illustration of pleasures and pains heretofore given, it is unnecessary to speak more in detail of these ends and their dispositions. A study of the associations and recombinations of pleasures is also a study of the concurrence and antagonism, and strength too, of dispositions leading toward those pleasures; and likewise shows the principal or subordinate character, the intermediateness or self-sufficiency of these same pleasures when regarded as ends.

CHAPTER LXVII.

DISPOSITIONS TOWARD SECONDARY AND TERTIARY PLEASURES AS ENDS.

§ 1. As we proceed beyond the primary pleasures and pains we always discover an increasing complexity of feelings; the pleasures there found are united and interfused, but are traceable to a plural number of sources; they are the results of compound and constructive association. Around some centre there is a gathering of a large number of representative feelings. The first group of secondary pleasures, it will be remembered, we made to embrace those of material objects around which are clustered in association the primary pleasures and pains in varying relations. Considered as ends the pleasures of this division concentrate about some material object, the acquisition and possession of which is desired for the subjective pleasure afforded by such acquisition and possession. The object desired has at some time when possessed given certain pleasures; its absence has occasioned certain pains. With the idea of the possession of that object, therefore, is associated the enjoyment and the ability to enjoy those pleasures and the ability to avoid those pains; to possess such an object, then, is an end. With its acquisition then are associated intermediate ends, all tending to the same superior end, namely, the possession of the object. But in all these cases, where the object is to be acquired, the acquisition carries with it an independent pleasure of its own, namely, the pleasure of movement and exercise; this is enjoyed in addition to the pleasures connected with the mere possession of the object sought; and sometimes, as has been before noticed in several places, becomes a greater pleasure than the end to which it first was intermediate. The possession of a hare is of some value, but that worth is not comparable to the value of the pleasures of hunting the hare, although the animal was undoubtedly first hunted for the sake of its possession. While presumably the hunting is for the end of possession, really the hunting itself is the superior end.

§ 2. From the nature of the case, *primâ facie*, all this class of secondary ends is made up of intermediate ends. We desire clothing that we may keep warm, weapons that we may keep our body whole and unscathed by the attacks of men or beasts; fresh air that we may enjoy breathing it; carriages that we may move without fatigue and more rapidly; tools that we may work; food that we may eat, wine that we may drink. But by the force of association the pleasure of having the thing sometimes becomes itself sufficient without the enjoyment of those pleasures which originally made that possession valuable. The stock illustration of this truth is that found in the miser's gold; and it seems to be the best example. The mere possession of the gold is a self-sufficient end, the advantages which having it would naturally bring being all sacrificed to gratify a desire to have and hold the treasure. In this manner, therefore, some of these intermediate ends become self-sufficient. In a similar manner, where the possession consists in participation, that participation often becomes an end in itself. The pleasures of a city, for instance, we reckon to be the pleasures of living in a city, including society enjoyments chiefly, and increased opportunities for activity; we participate in the advantages of the city; and yet we make living in the city an end in itself, though we reap none of the benefits which make such a residence a thing to be sought. If we are there we are satisfied, whatever betides. In addition to these self-sufficient ends growing out of possession, there is always in this class of ends the possibility that the acquisition may become an end in itself, as gratifying a desire for movement and exercise.

§ 3. As ends of acquisition, pleasures associated with material objects having close relations with the primary pleasures and pains may become principal ends. The acquisition of money frequently is a principal end; so also the getting of goods of all sorts, though generally it is the securing of wealth that is the chief end, and not any specific things that constitute wealth. In the same way the possession of money, gold, silver, or treasure is not seldom a principal end, though the same qualification should be made here also. But for the most part these ends are subordinate.

§ 4. Of course when two objects present themselves to the mind as desirable, but of unequal values, and both are not attainable, dispositions in various degrees of antagonism are formed. On the other hand, when the attainment of one object is an aid to the acquisition and possession of another which is desired, also coalescent dispositions are formed; and when a desire arises to possess two things the possession of which leads to the possession of some third thing beyond, we observe a concurrence of dispositions, as also where two compatible dispositions exist toward two things not connected with a third. I may desire clothing and also books; if I have plenty of money I may be able to gratify both those desires, and the dispositions to do so may be concurrent. If, however, I have little money, the desire for books may be brought into antagonism with the desire for clothing or the converse, and one may operate as a deterrent upon the other. I may desire brick and lumber and may also desire a house; the disposition toward the former is then coalescent with the disposition toward the latter, and if I desire also carpets and upholstery, the latter disposition will be concurrent with the disposition toward the acquisition of brick and mortar.

§ 5. In the second group of secondary pleasures we advance a few steps in the scale of representativeness, and pass into the region of ideal pleasures. But at the outset let us remark a large number of actions and states which are direct ministers to the primary pleasures. Breathing, walking, riding, lifting, sitting, reclining, eating, drinking, all are terms carrying the mind back at once to the primary ends. We may speak of the pleasures of breathing, referring to the subjective feeling, in which case the pleasures are primary; or we may speak of the same, referring to the muscular action which produces the subjective feeling, in which case the pleasures are secondary; or again, we may speak of the pleasures of air—secondary also. All these are of the nature of intermediate ends, and some of them by repetition become ends in themselves. Beyond these ends, there is no difference which demands notice here between the second and third groups of secondary pleasures. Many of these are ends connected with actions running over an extended period, habits of action indeed. Of these latter temperance affords a fair sample. The pleasures of temperance are the pleasures attending a systematic and regular restraint of imperious appetites; pleasures which are largely representative and imply a considerable amount of forecasting. Here, as before, the end may be an intermediate one or may be self-sufficient. *Temperance* may be pursued as an end to health or society, or it may be by association exalted in mind to the dignity of something desirable for its own sake. Usually, it is considered in both lights, it is regarded as an advantage for the various reasons of which two have been noticed; besides, temperance is thought to be good in itself. It is hardly ever held to be a principal end, however. Dispositions toward temperance meet with powerful antagonists. The dispositions toward most of the appetitive pleasures are strong enough to carry the individual to excess, and they are only overcome oftentimes after something of a conflict. A disposition toward temperance is often helped by one toward occupation. *Gentle speech* and *demeanour* express another collection of ends which relate to a habit of action. Dispositions toward these ends are opposed to those connected with aggression and conflict, but are concurrent and coalescent with most of the social dispositions. *Occupation* is an end quite similar to temperance in its character, and very often comes to be an end in itself. Dispositions toward occupation are opposed by dispositions toward repose and its associates. Another variety of these ends is exhibited by the term *Security*, where the end is a state from which is absent a feeling of the promixity of causes tending to produce pains. This is an important end of human volition, and is a self-sufficient as well as an intermediate end; it is highly ideal and representative, its various means are the acquisition and possession of protective articles of different sorts, and the formation of habits which experience has shown to be protective; in the broadest sense of the word, for security the maintenance of public social order is a prime means. The predatory dispositions are toward secondary ends, and many of them grouped under the head of *Aggression*, *Conflict*, and *Triumph*. These dispositions are readily traceable through successive generations; an appetite for killing exists very frequently in men irrespective of any end of the killing, and is sometimes very strong. Conspicuously these are ends in themselves. As before remarked, the sexual and social dispositions are the chief antagonists to those of this group. Such pleasures as those associated with a fine spectacle, as a sunset for example, are mainly æsthetic. They are consequently self-sufficient ends, for the most part, though an æsthetic delight may be a means, as for example to a high development of character. But as ordinarily sought, they are ends in themselves. The æsthetic pleasures are pleasures of the eye and the ear, and some degree of repose and leisure is requisite to their enjoyment and cultivation; accordingly dispositions toward repose favour the æsthetic dispositions, though dispositions toward those activities which secure for us such pleasures cannot be dispensed with as auxiliaries. A man will go a great way and take a great deal of trouble to enjoy a fine sunset, but his mind must be free from care and anxiety and somewhat above the ordinary toils of life to be willing to go far for such a purpose and to appreciate it fully when the view is present. Dispositions toward these and other æsthetic pleasures do not subsist to any great extent where there is a necessity to make the attainment of things requisite to sustain life an end engrossing much attention and desire. Dispositions toward the presentative primary pleasures are antagonistic to æsthetic dispositions. Lastly, *the happiness of others* is an end which has been growing in importance as civilisation has progressed. With a great many and at many times it is a self-sufficient end; with some a principal end. Its intermediate characters are many, for everyone sees a thousand advantages resulting from the happiness of those near him. Dispositions toward this end, happily, often show marks of inheritance; they are, as a rule, concurrent and coalescent with the social and sexual dispositions, and antagonistic to the predatory. The operation of the economical prudent dispositions produces deterrents, and sometimes the antagonism between the two is pretty evenly balanced; oftener the economical are in the ascendant.

§ 6. Those most highly representative pleasures described in this work as the tertiary do not differ much in their character as ends from those just referred to; they are, however, much broader in their scope and include much more. The pleasures of living as opposed to dying, which constitute the first group of ends, have a strong hold upon all men. A long life, or a life to the full measure of one's days, is a prominent end with all, and as constituting that end all the pleasures experienced in living or expected to be experienced are associated in thought. To live and preserve one's life is a self-sufficient end, and yet we often hear people speak of living only to certain ends, to do certain things, as to be of service to one's family or country. It is by no means infrequent for people to say that all they care to live for is to do thus and thus. Similarly with the hero, who gives his life for a cause or an idea. In such cases the mind makes the pleasure of living in general subordinate and intermediate to some particular pleasure of living. But much allowance is to be made for extravagance of language, and ordinarily when people who make the statements just referred to have accomplished the end which they seem to make superior, they have just as strong a disposition toward life as before. And even with the hero or the martyr the disposition toward life is strong enough to make him sell his life as dearly as possible. Characteristically, therefore, living is an end in itself, though intermediate as well to certain special pleasures of living. We notice here the same condition of things we commented upon in discussing some of the primary ends. That which we constantly have and enjoy, we do not desire, and it does not consciously appear as an end to be sought, but becomes intermediate to and a basis of other enjoyments. From moment to moment we do not desire to live, because we *are* living; but looking forward to the future and seeing the contingencies of life and its uncertainty, while observing also that some do attain a maximum of years, we desire to prolong our existence and make a long life an end of pursuit. Living then, as thus explained, becomes a principal end with human beings. It sometimes sinks to the level of an inferior end, as with the martyr, or the suicide, and probably with many others who are absorbed in the pursuit of special pleasures. But let life actually be endangered, and its preservation, the preservation of the integrity of the body, in the vast majority of instances becomes an end of paramount importance. Looking at the dispositions, we find those of an egoistic character on the whole favour the disposition toward living, and yet this must not be interpreted too broadly, for men often are anxious to live for the sake of their families or those dependent on them. Besides those dispositions which lead to aggression and conflict are antagonistic to the dispositions toward living, though they too are formed in furtherance of a disposition to prolong life. It is hazardous to say without qualification that dispositions toward any one large class of ends are as a whole either concurrent with or antagonistic to those of another large class. Some of them are one way and some another; and they vary according to circumstances.

§ 7. Health is an end partially coincident with life. Good health is generally considered a means to long life, and a person desiring the latter directs his attention to securing the former. So also health is regarded as a means toward almost all other pleasures. Its character is more that of an intermediate end, consequently, than of the other class. It seldom appears as a principal end. Dispositions toward health are often weakened and opposed by dispositions toward particular appetites, and by dispositions toward such pleasures as knowledge and power.

§ 8. Knowledge, power, and wealth are allied as ends, and yet opposed, in the manner indicated in the chapter on the tertiary pleasures and pains. They are means to each other and to other pleasures, and ends in themselves. Men naturally make the associations which constitute these three groups; and, probably, no three collections of pleasures could be selected which are more prominently before the mind as ends than are these. They require labour to attain and care to keep. They are to be regarded as self-sufficient, characteristically, and also as principal ends. With the same person, however, not more than two of them, at any rate, are principal; wealth and power may go together, and knowledge and power, but the three do not have equal rank in any one mind, and wherever two of them occur, one will usually be subordinate, though they may keep along concurrently. Dispositions toward these pleasures are substantially egoistic, and are opposed by the altruistic dispositions, and also by the less far reaching egoistic dispositions. Nevertheless, when these ends are made subordinate to altruistic ends, the dispositions must be characterised as altruistic. The power of inheritance may be marked here in very many cases; with some the disposition toward the acquisition of knowledge is very evidently connatural; with others, the disposition to acquire wealth; with others, power.

§ 9. Good repute and good character, as ends, have reference to society very prominently, especially the former, and, like those we have just left considering, are fairly entitled to be called principal ends. As with all others, however, these ends have their intermediate offices. Good repute is often essential to wealth and power, and to almost all the wider range of social pleasures. Good character bears the same relation to the mind as good health to the body. Probably the dispositions toward these pleasures are not as strong as toward some of those last mentioned, but the prevailing ends differ during different periods and epochs of the world. Fame and power are kindred objects of desire. Character, as apart from fame, is a somewhat rarer end. Perhaps the dispositions toward good repute and good character should be classified as prevailingly ego-altruistic, since they are not so fully altruistic as those seeking the welfare of one's family or one's country, but yet have more reference to, and are more dependent upon, the conditions of others than the tertiary ends we have previously noticed. The more engrossing appetitive demands, and such ends as the acquisition of wealth and power, are frequently antagonistic to dispositions in these directions, while the social dispositions, for the most part, are concurrent and coalescent with them.

§ 10. Under the titles social order, liberty, and the like, are collected a great many altruistic ends. Among a people like the Romans in their earlier days, or in the earlier history of the United States, such ends as these were principal with a large fraction of the people; at the present time in America, particularly in the large cities, they are usually subordinate to many egoistic ends of personal profit and aggrandisement. The variations of patriotism as a prominent end show the changes from the highest self-sufficiency to various grades of intermediacy.

§ 11. Heaven is characteristically an ego-altruistic end; with most I am inclined to believe it actually is egoistic. But whatever desires and ends a person has with regard to his future on earth are projected forward into the other life; and if his desires with regard to this life are egoistic, they will be egoistic with respect to heaven; if altruistic as respects the life that now is, they will be altruistic with respect to the life to come. Heaven is a self-sufficient end, and highly ideal. It cannot be said that with the majority of people its pleasures are principal ends; their ideality and remoteness prevent their occupying a very large place in thought. Persons of a religious nature, however, in large numbers do, according to their respective ideas of heavenly delights, make them principal ends; and they make their various ends, appertaining to the present life, ministers to the higher end. As most men view the subject, carnal pleasures and worldly pleasures generally create antagonistic dispositions to the disposition toward the joys of a heaven, while spiritual or ethical pleasures give rise to concurrent and coalescent dispositions. Almost everything altruistic is favourable. Generally speaking, ethical ends are self-sufficient, but not absolutely so. They are sometimes, but with the few rather than the many, made principal ends. Of course they are favoured by altruistic dispositions, and opposed by egoistic. Æsthetic dispositions, inasmuch as they have a considerable element of altruism, upon the whole assist ethical dispositions, though some of the most refined and most incorrigible egoism is developed through a pursuit of æsthetic ends.

CHAPTER LXVIII.

ELEMENTS OF THE VALUE OF ENDS AND DISPOSITIONS.

§ 1. WE have thus far been trying to ascertain what ends and dispositions do as a fact exist in minds and the relative positions they actually occupy, so as to present a fair and accurate picture of the human mind as it is in these respects. This would be a necessary preparation for, and is a natural introduction to, an inquiry into the relative importance of ends and dispositions with a view to determining not what ends *are*, but what *ought* to be held as of prime consequence. That such an investigation is itself of great value is patent. In other words, a study of ends and dispositions as they exist leads, and should lead, us into attempts to ascertain what dispositions should be cultivated and what repressed, and under what circumstances a given end should be raised and under what it should be lowered in appreciation. This inquiry is the proper concern of the science of education; but it will not be out of place here to survey the subject in a general way, and to indicate some of the elements which constitute the value of an end or disposition. Indeed, we should hardly be excused if we failed to do so; for unless those elements are set forth in a more general study of the products of volition, it will not be altogether plain how the ends and dispositions which exist came to attain their respective positions; and we should have no ground for predicting the future of any mind, since we should not know how to educate in any direction that might seem to be desirable, nor what would be the effect of any steps we might take. Besides, a reasonable degree of completeness demands that we consider this question which is inevitably raised by an examination of volitional products, and thus lay a foundation in psychology for the science of education to build itself upon.

§ 2. The results of an observation of what *is* may be briefly summed up. In the earlier and more rude stages of society the presentative primary pleasures are the more prominent ends; the ends also are more characteristically egoistic; the dispositions run together toward presentative, primary egoistic ends. In the progress of the race, altruistic and more representative ends appear more conspicuously. Tertiary pleasures are sought, and ideal pleasures generally are more valued. But at all times the full facilities for the enjoyment of the presentative primary pleasures seem to be a *sine quâ non*. As these are secured and made secure, the more representative and complex ends engross attention and desire. The tendencies of the race are from presentative ends as self-sufficient toward the more representative as self-sufficient, and from the egoistic as self-sufficient to the altruistic as self-sufficient.

§ 3. In general terms, the value of an end or disposition is the extent of its eudæmonistic character, or the amount which it contributes to happiness; and it is valuable in the proportion in which it is on the whole eudæmonistic or anti-eudæmonistic in its tendency. In order, then, to determine what is the eudæmonistic character of an end or disposition, little more is necessary than to review what has been heretofore said respecting the value of pleasures and the elements of happiness. This we will now proceed to do, amplifying in some particulars.

§ 4. (1.) One element in the valuation of an end or disposition is the intensity of the pleasure sought. The amount of pleasure which can be concentrated into a given moment is a considerable item. The greater the intensity the more pleasure for the time it lasts.

(2.) The pervasiveness of the pleasure sought is a second consideration. Apart from the intensity of a pleasure, its diffusion is an element of value. A general massive feeling of satisfaction is always desirable.

(3.) The duration of a given pleasure is a third element. Given two pleasures of equal intensity, the one which endures the longer is preferable.

(4.) The recurrence of a pleasure is allied to its duration. A pleasure which can be renewed and repeated many times is worth more than one which cannot be repeated at all or only a few times, other things being equal.

These are the chief elements of the value of single pleasures or sets of pleasures. But the fact that there are numerous and various sources of pleasures and pains creates a necessity for the comparison and balancing of pleasures. One pleasure may yield great intensity and little pervasiveness and duration; another may endure long but be less intense. As remarked in the chapter on Happiness (Chap. LXIII.), a low degree of intensity and long duration is preferable, as yielding more pleasure, to a high degree of intensity and short duration. Now when we come to study pleasures as ends and the dispositions toward those ends, the facts of the differences between pleasures, and the greater or less quantity of one group as compared with another, appear quite prominently in the antagonism of dispositions. The resultant bearings of an end and disposition on happiness are also seen to be affected very materially by the association of ends and the concurrence of dispositions. Associations are all the time going on, one end is made intermediate to another, and dispositions are all the time running in with each other and being overpowered by one another.

Accordingly, in addition to the elements of value of the single pleasures or sets of pleasures which have been stated, we must also regard the synedonistic quality of the ends and dispositions, or their ability or tendency to draw other pleasures to themselves with the result of accumulating a large quantity of pleasure in excess of pain. A pursuit of some pleasures is on the whole synedonistic as the pursuit of a competence ; a disposition toward others, as the pleasures of intoxication, is anthedonistic. Following some ends, we seem to gather around what is sought a multitude of other enjoyments all conducive to happiness; equally letting ourselves seek other ends we seem to fall into the track of numerous pains and disasters. The former ends, with their dispositions are synedonistic ; the latter are anthedonistic.

It will readily be seen that the synedonistic quality of a disposition or end is the most important subject of inquiry. For however intense or pervasive a pleasure may be, if its effect is to deprive us of the means of obtaining other pleasures, or to drive away happiness, it is not to be sought after. If, however, it attracts other pleasures, and in the degree that it does so, it tends to promote happiness, and is desirable as an end.

§ 5. It is always of the highest consequence in considering the value of an end to determine its attainability. If a given end cannot within a fair range of probability be attained, and effort put forth to reach it is futile; it is not synedonistic, and the representative pleasures associated with such an end are by no means compensatory for the pains suffered. The pursuit of any end excludes in the degree that it is engrossing the following after other ends, and where time is spent for an end beyond our reach, it is at a sacrifice of ends which are within our grasp, only to secure at the last the pain of a disappointment which is greatly aggravated by the thought of the loss of what might have been gained by a proper direction of efforts. Moreover, in pursuing such an end, we practise a species of self-deception, or blinding of our own eyes, for we accustom ourselves to regard as attainable that which is not so. The result of this is to give us erroneous and distorted ideas of what will bring happiness and misery; for, in order to reach the end which we believe to be attainable, but is really unattainable, we shall be assuming a condition of things which does not exist; and, relying upon that assumed condition, in following the means to the end before us, we are all the time mal-adjusting ourselves to our environment, thus multiplying pains and the chances of pains; we are all the while throwing ourselves out of gear.

§ 6. Since the condition of things differs in different places and at different times, it follows that what is attainable with one man and at one period, is not attainable with another and at a different epoch. It is, then, necessary for each individual to consider whether or not for him an end is attainable, and under what limitations and conditions it is so. The particular circumstances of each person must enter largely into the determinations of what ends he should pursue. We cannot, and should not, absolutely declare that such and such ends are valuable, but rather that under such and such conditions they are of value and should be cherished. We must find out under what circumstances a given end is worthy of being sought, then inquire whether or not those circumstances exist; if they do, we may encourage the aiming toward that end, otherwise discourage it. Ends are relatively valuable, and how far they are actually so depends upon particular circumstances and conditions.

§ 7. The foregoing remarks apply to all questions as to the relative value of real and ideal ends, or egoistic and altruistic; and whatever conclusion is by anyone arrived at as to such comparative values, should be subject to the modifications which particular circumstances may or might make. Let us now further remark that another element of the value of an end is its *necessity*. Under certain circumstances some things must be sought from a necessity to gratify fundamental appetites. In the pangs of starvation or thirst, relief must be obtained, or the individual dies. There is no relinquishment of effort admissible; nothing else can take precedence; the end rises in value to surpass everything else. Until this want is satisfied, there is no room for other ends; the greatest possible strength of disposition prevails. Under such an urgency, an end of effort arises which is of the highest possible value, for upon its attainment rest all enjoyments whatever, and upon the failure to reach it, there is consequent an experience of the greatest ills known.

§ 8. A further consideration in estimating the value of an end is its comparative difficulty of attainment, though attainable. We have already seen how, if a thing is within reach and the desire for it readily gratified, that desire does not persist in thought, and the thing desired assumes less the character of an end. Now if a thing is desirable, but not readily attainable, the difficulty of attainment enhances the value of the end. The very difficulty frequently operates as a stimulus to exertion. This element of value, however, is balanced and controlled by the considerations of the increased value of a recurring pleasure and the attainability or non-attainability of the end: for an end may so infrequently be reached, and the difficulty of gaining it be so great, as to make it practically unattainable, and thus to detract from, or destroy entirely, its value in a great measure.

§ 9. Again, it is in all cases desirable to determine whether an end is to be a principal or subordinate one. That which, as a subordinate end, is of great value, may be of little or none as a principal end. Measured with reference to its bearings on other ends, it may be valuable or not in an entirely different degree from what it would be if measured with regard to its independent value. Early rising may be an exceedingly valuable end to health, wealth, and wisdom; but as a principal end of human effort, it would be ridiculous. The possession of books may powerfully conduce to the acquisition of knowledge, but, as a principal end of existence or effort, such an acquisition would be of minor consequence.

§ 10. An important inquiry arises as to what is the relative value of the primary pleasures as ends, and those highly representative, complex, and integrated pleasures which I have denominated the tertiary. And first, we will consider their relations as principal ends. Primary pleasures, when made principal ends of activity, have the effect to fasten the attention and desire upon the sensation. The thoughts are directed toward the sensational pleasurable experience, and are constantly seeking a repetition of that experience; the mind does not rest satisfied with a representative pleasure, but is eager for a return of the presentative. The result of this is that the importance of conservation of pleasure is lost sight of. Providence is not found in such a case. The nearest means of gratifying the desire is seized upon, and there is little consideration of the future. Economy of pleasure no longer exists. Hence, there is greater room for the operation of pain-producing agencies; they are not guarded against; there is no fore-warning and no fore-arming. Allied with this is the further fact that making sensual pleasures principal ends has the effect to shorten their duration and prevent their repetition and recurrence, through a weakening of the organs through which the pleasure is produced. All the evils of excess are engendered, the system is broken down, and the vitality destroyed. Another way of stating the same fact is to say that one pleasure is cultivated and pursued to the utter neglect of others. The enjoyment of eating and drinking is sought, while the pleasures of organic integrity are despised. In order to obtain happiness, there must be a balance preserved of pleasures. If one set is eschewed, there will, in all likelihood, be a considerable increase and greater predominance of the corresponding pains; and unless all the primary pleasures receive their due share of cultivation, there will be a superabundance of one group of pleasures (or a few), and with the depreciation of the others a prevalence and overmastery of pain, which overbalances and countervails the pleasure, and makes misery instead of happiness.

§ 11. It should further be noticed that when a person makes the primary pleasures principal ends, he sets himself against the line of development of the human mind, and begins a retrogression. This line of development is from the simple to the complex through the redintegrating processes, that is to say, by means of representations. In order to foster such a development, the mind must pursue as its principal ends more highly representative ideals rather than less representative and sensual pleasures. He who follows the latter sets himself to repress and thwart the principle of growth of his own nature; and, if the growth is arrested, soon causes decay.

There are times when necessity temporarily makes the pursuit of a primary pleasure an end of paramount importance. In such a case its function as a principal end need last only till the pressure of necessity is removed and the want assuaged. For the time, its value is above that of all other pleasures, and ought to be, since life depends upon its gratification.

§ 12. From considerations like those just adverted to, it will be sufficiently evident that the primary pleasures as principal ends are anthedonistic in the main, and not synedonistic. On the other hand, the tertiary pleasures as a class regarded as ends, are free from some of the objections which prevail against their originals, the primary. The objects on which the mind dwells when considering the tertiary as principal ends, are highly representative ideals. It does not pursue a particular pleasurable sensation, but a general state or condition of vitality extending over a long period of time, and embracing a vast variety of pleasurable constituents; it seeks long life, and not any special sensation of vitality. A person no longer aims at the pleasure of a good meal or morsel, or of warmth when a suitable robe is put upon him; he follows after an abstract ideal of what will enable him to command all these good things at any time and place. In making the tertiary pleasures principal ends, we are conserving, economising, and fostering our pleasures. Moreover, the tertiary pleasures follow abstractions from cognitions which do not attach themselves to one set of primary pleasures exclusively. They take something from a number of the primaries. They sift out the pains and give us a product in which there is something done toward the balancing of pleasures. In seeking wealth we are not expecting to realise a certain pleasurable sensation belonging to a single group of primary pleasures, nor even to obtain the means for, or ability to obtain, such a sensation, but to gain the ability to again enjoy pleasures connected with all the primary groups. We are not representing pleasures of repose or alimentation, but pleasures of repose *and* alimentation, and all the others besides—in a word, happiness itself.

§ 13. Since the tertiary pleasures when held up as ends are so representative and ideal, and are made up of a variety of experiences of which the pleasure is an end to be sought, the avoidance of the pains connected with which constitutes itself a part of the pleasure, in aiming at sub-tertiary pleasures we are acting prudentially; the end sought is obtained only by patience and self-denial; pleasures which are hostile to the obtaining of that end are excluded, pleasures are compared with each other, and the better and more valuable, as indicated by the end to be sought, are preferred to those of less value. Not mere pleasure is involved in the pursuit of a tertiary end, but happiness or the excess of pleasure over pain. And inasmuch as this calculation respecting the comparative values of pleasures is entered into and carried out, the destructiveness of a blind pursuit of a specific sensual pleasure, irrespective of the pains which lurk around it, is avoided. The growth, preservation, and reproduction of pleasures, the diminution, destruction, and extirpation of pains is fostered.

§ 14. Of course there must be a moderation in the search after a given set of tertiary pleasures, and due regard paid to other tertiary pleasures. We cannot say that the pursuit of wealth is synedonistic if exclusively followed, and to the detriment of health. All sources of pleasure must be taken into account, and the proper cultivation as determined by circumstances bestowed upon each.

§ 15. In point of yielding intensity of pleasure, sensational ends take the precedence as yielding pervasiveness and duration of pleasure, while as favouring recurrence of pleasure, tertiary ends are, generally speaking, entitled to the precedence ; and considering the two as relating to the class of principal ends, the tertiary are synedonistic, and the others anthedonistic. Hence, the former are of greater value.

§ 16. Having discussed the respective values of primary and tertiary pleasures considered as principal ends, the remainder of the comparison is very simple. For the value of a subordinate end is precisely in the ratio in which it contributes to subserve its principal. If the attainment of wealth is of importance to procure the pleasures of repose, it is more or less valuable for that end according as it conduces to it in comparison with other subordinate ends. If we eat to live, eating is of value according as it sustains life; if we live to eat, living is of value according as it helps us to gain the gustatory pleasures.

The moralists and religionists who have been always decrying sensual pleasures and elevating moral ideals as ends of activity, are therefore right, though the reasons they give for their positions are usually wrong. The true ground and the only ground on which a subordination of the primary to the tertiary pleasures as ends is to be justified lies in their respective eudæmonistic characters. It is better to follow after the abstract ideals around which those pleasures gather, which we call tertiary; but better because such a course conduces to greater happiness.

§ 17. Let us now consider for a moment the relative importance of egoistic and altruistic ends. And into such a consideration a new element enters, and with it an opposition occurs. An egoistic end may be of more value for the happiness of the individual, an altruistic for the happiness of the race. That an individual live may be more for his happiness; that he sacrifice himself in battle may be more for his country's good. We have already seen how, through the primary pleasure of society, the happiness of the one is linked in with the happiness of the many. How far, then, the happiness or good of the race may be of importance to a given person in contributing to his own happiness, is a question the answer to which would vary according to that person's education; and how far education should go in endeavouring to make an individual's happiness consist in the happiness of others is a problem to be solved only with the nicest discrimination. With egoistic ends are classed the predatory; with altruistic the social. The constitution of human nature is such that the pursuit of egoistic ends is necessary for self-preservation and self-conservation; but equally is it true that some degree of altruism is necessary for the same purposes. Regard must be paid to both in the interest of each and every individual. What is the proper balance between the two, and how far the altruism is to be extended, whether to the family, the town, the state, or the race, we cannot attempt to indicate here, but must content ourselves with remarking the necessity of admitting a double standard to determine each individual's moral conduct, and the further need of preserving a just balance, adjusting itself differently according to circumstances, between egoistic and altruistic dispositions. Some degree of both are important for each one's happiness. The problem of education is to determine how the two should be regulated quantitatively.

§ 18. A similar line of remark to that just made regarding primary and tertiary pleasures as ends may be pursued with respect to sensational and ideal ends. Sensational and ideal pleasures, it must be recollected, do not correspond precisely with primary and tertiary respectively; there are ideal and sensational primary pleasures, the former being representative of the latter; the tertiary pleasures as ends are ideal ends. The question, therefore, to be considered here is of the respective values of tertiary and ideal, secondary and primary pleasures, as set over against sensational primary and secondary pleasures; and the only important inquiry is as to their respective values as principal ends, for as secondary ends their consequence is determined solely by the principal end and the degree in which they further that end. And questions as to their importance as principal ends are limited, too, by all the considerations of circumstances generally, of necessity, attainability, and comparative difficulty of attainment. Respecting their synedonistic qualities, it is obvious that, still speaking generally, the pursuit of sensational pleasures as ends is open to the same objection as the pursuit of primary pleasures as opposed to tertiary. Where the attention is prominently and prevailingly directed toward the sensational, the conservation and economy of pleasure is lost sight of. There is no foresight, and the weakening of the organs of and susceptibilities for pleasure is inevitable.

Intensity is gained to the great detriment of duration and repetition. An over-stimulus of the organs is followed by their weakening and perhaps destruction. The reverse of this happens where the ideal pleasures are made the chief ends. The pleasure is sifted out from the pain, the thought of how to get the most pleasure and the least pain leads to an economising of pleasure and a calculation to avoid evil. The manner in which this operation proceeds may readily be noted. When we have before the mind an ideal pleasure we have a representation of some sensational pleasure, but ordinarily with most of the pain attendant upon the real experience eliminated, for the mind will not dwell upon pain nor recall it, except as forced to do so. Contemplating, then, the ideal pleasure, a contrast between that pleasure and the corresponding sensational pleasure is made to the disadvantage of the latter; it is appreciated that the realisation of the ideal pleasure would, if the original experience were repeated, carry with it many painful things which do not enter into the ideal. An effort hence arises to realise the ideal end as it appears in the mind, divested of the disagreeable attendants of the original experience. The mind then sets itself toward ascertaining how the pains of that original experience may be avoided and how the pure ideal may be realised. Thus, when following an ideal end, we are constantly led and drawn away from pain and toward a refined and enlarged pleasure. In other words, an ideal end is synedonistic.

CHAPTER LXIX.

THE SUMMUM BONUM.

§ 1. IN connection with the subjects of ends and dispositions towards ends, discussions as to the greatest or highest good have almost always arisen from the very dawn of philosophising. Much fruitless speculation has taken place in the course of these discussions, proceeding from the fact that thinkers have approached the topic imbued with scholastic or *à priori* notions, which have prevented them from dealing with it in a scientific spirit, and by a scientific method; but, notwithstanding this barrenness of results of a considerable portion of the inquiries as to the *summum bonum*, no less important consequences naturally flow from them than the fixing of the ethical standard, and the determination of what ought to be the chief ends of human endeavour.

§ 2. The Roman orator, man of letters, and philosopher to whom the world is indebted for the treatise 'De Finibus,' has presented in a remarkable manner in that essay the true philosophy of this subject, in setting forth the doctrines of Epicurus, the great ethical teacher of the Greeks; and as remarkably has he exhibited the arguments which, from the beginning to the present, have been repetitiously urged against that philosophy—arguments whose inefficiency, as they were stated then, and as they are stated now, is no less conspicuous than the assurance with which they are brought forward and reiterated by their advocates, as conclusive and irrefragable for their side of the question. Both in the days of Cicero and in modern times thinkers have misunderstood the Epicurean philosophy, not seeing the strength of the psychological principles on which it rests, and have misrepresented it through an obstinate perversion of its meaning and tendencies. The way in which they have misunderstood and perverted it receives nowhere any better illustration than in the treatise I have mentioned. They never seem to have been able to comprehend that pleasure is not confined to things sensual, but belongs as well to the intellectual, the moral, or the spiritual; nor that when men affect to despise and avoid pleasure, it is only a greater pleasure that they are seeking. 'The wise man holds to this principle of choice in these matters, that he rejects some pleasures, so as, by the rejection, to obtain others which are greater, and encounters some pains, so as, by that means, to escape others which are more formidable.'[1]

§ 3. The only way in which any satisfactory determination can be reached as to what is the *summum bonum* is by a reference to the ultimate experiences of the human mind. And looking in that direction for a solution of the problem, it seems to be necessary first to know what a *bonum*, or good thing, is, in order to learn what are its superlatives. An appeal to such an arbiter as the one suggested reveals two kinds of experiences, which are the earliest, the most marked, and the most unanalysable of any which occur in the sentient life of the individual. The one kind of experience is that which we desire to repeat and perpetuate;

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[1] Itaque earum rerum hic tenetur a sapiente delectus, ut aut rejiciendis voluptatibus majores alias consequatur, aut perferendis doloribus asperiores repellat.—*De Finibus*, I. 10.

the other, that which we desire to annihilate, prevent, and avoid. One we draw toward, the other we flee from. We call the one experience pleasurable, the other we term painful. There are in the life of the individual innumerable experiences of each kind; the agreement of all of each class, and their sharp opposition to all of the other, cause us to associate together the one set under the common term *pleasurable*, and the other group under the antithetical term, *painful*. A *good thing* is a thing which gives us a pleasing or pleasurable experience; a thing the opposite of good is what gives us correspondingly a painful experience. On the side of volition, whatever is desired, so far forth as the individual desires it, is to him a *good thing*; whatever is avoided, so far forth as the individual repels it, is to that individual a *malum*.

§ 4. If now the will inclines toward those things which are pleasurable and away from those things which are painful, and if both the pleasurable and the painful do as a fact come into everybody's experience, then the maximum of the pleasurable and the minimum of the painful are the chief objects of desire. This contemplates a maximum of pleasure for a given period over and above what pain is inevitable and cannot be avoided. But such a maximum or excess is no other thing than what we mean by the term happiness, and the period considered is the human lifetime. A *bonum* is something pleasurable; the *summum bonum* is the greatest amount of the pleasurable attainable during the existence of the sentient being.

§ 5. This view of what constitutes the *summum bonum* follows naturally, and as it would seem, necessarily, from a philosophy which takes its stand upon experience as its foundation, and appeals solely to experience as an arbiter to determine the validity of its principles. Having accepted the dictum that the facts of experience are at once the data and the criteria of philosophy, and believing that science is only *principia generaliora* and philosophy nothing more than *generalissima*, the conclusion is inevitable that a pleasurable experience, presentative or representative, is the object of volition, and that the greatest amount of pleasure, or happiness, is the *summum bonum*. In the light of such a philosophy no argument is needed to substantiate this truth. All the lines of association support it, and the mind yields assent to it as soon as stated and clearly apprehended, not because it is a self-evident *à priori* idea proved independently of experience, but because a universal agreement of all experience proves and establishes it. It matters little what name is applied to characterise the highest good. Back of the name lies the experience, and that which is desired on the one side is generalised and set over against that which is avoided. The greatest excess of experiences gratifying desire over experiences baffling it is the *summum bonum* to be gained, by whatever name you choose to mark the same. The word happiness most exactly expresses that excess, and is properly chosen for the purpose. 'Therefore, say the Epicureans, 'this notion is implanted in our minds naturally and instinctively, as it were, so that we *feel* that the one is to be sought for, and the other to be avoided.'[1]

§ 6. It is impossible to answer fully the question what is the *summum bonum* without a reference to psychology. As has been before remarked, the problem must inevitably be worked out through an examination of the human mind, for the existence of a chief good concerns primarily and vitally human action. The good is a good with respect to my pursuit. What I apprehend to be the highest end of endeavour is my *summum bonum*. So that, since action follows volition and intelligence directs and guides volition, the laws of will and the laws of intellect, if any such laws there be, ought to and must indicate what are the objects of volition and with it the ends of action. Those laws show a pleasant thing to be an object of desire; a painful thing an object of aversion. By generalisations from these observed facts, it appears readily and plainly enough in the widest reach of the mind that the greatest quantity of pleasurable experience is the superlative good. Now, in answer to such reasoning, it has been claimed on the one hand that such a generalisation does not include all that there is in the idea of the *summum bonum*, but is defective though the method is a proper one; on the other side some are ready to object that the finding and determination of the *summum bonum* is not possible by such a process, and is not a matter of generalisation at all.

§ 7. Both of these parties find the highest ethical good in something which they conceive to be over and above happiness, which they variously style *worthiness*, *blessedness*, *virtue*, etc. To confound these with happiness, they say, is to ignore important and fundamental differences. Virtue may subsist not only without happiness, but in opposition to happiness; a man may consciously be worthy to be happy and yet not happy at all, though preferring worthiness to happiness, though choosing virtue above all things.

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[1] Itaque aiunt hanc quasi naturalem atque insitam in animis nostris inesse notionem, ut alterum esse appetendum, alterum aspernandum sentiamus.—*De Finibus*, I. 9.

§ 8. As to the first of these assumed chief excellences the question at once arises: Worthiness of what? 'Worthiness of spiritual approbation,' we are then told. Enough for the man 'that he *is* in the sight of his own spirit and of all spirits worthy of spiritual approbation.' The very phraseology here used shows that this claimed supreme good is dependent upon some other good more ultimate. Would those who urge this standard deny that the spiritual approbation is a more excellent thing than the worthiness of it? And then, too, does it not appear that to be worthy of such an approbation is one of the best means of getting it? So it would seem as if the approbation itself is the higher good, and that worthiness is advanced as a sort of consolatory substitute, since such approbation is not always gained when deserved. Moreover, this worthiness in the sight of one's own spirit can be nothing other than the spiritual approbation of one's own spirit; and this would seem to include in reality all that is meant by this mooted chief end. To have one's own spiritual approbation means, if it means anything, a consciousness that the person is worthy of the approbation of other spirits. If, therefore, we substitute for 'worthiness of spiritual approbation,' *consciousness of spiritual excellency*, we shall have all that is embraced in the former. But consciousness of one's own merit or excellency of any kind, as also one's own approbation and the approbation of others, are all alike elements and constituents of happiness; they are not all of happiness or the only happiness, but they constitute a variety of happiness.

§ 9. President Hopkins observes, apropos of this alleged *summum bonum*:—'What is that in which a man's worthiness of spiritual approbation consists? It is in his choice of an ultimate end. The character is according to that. Does then the highest good of man consist in his choosing as an ultimate end his own choice of an ultimate end? This cannot be, and yet it would seem to follow from the definition. . . . How, then, can that be the highest good of man which, if he really had it, he would think of only as the man who has healthy lungs thinks of his breathing.' 'No doubt worthiness is conditional, and in a moral being necessarily so for blessedness. But the word, though it may be used absolutely, naturally carries with it an indication of something beyond itself. A worthiness of what? Of approbation? And why not of the blessedness there is in and through that worthiness and approbation?'[1]

§ 10. Now as to President Hopkins's *blessedness* as a *summum bonum*, it is quite significant to remark that on turning to the Dictionary of the English Language,[2] the very first definition given of the term is *happiness*, and the second is *felicity*. After this general explanation follow two specific kinds of happiness, namely, *heavenly joys*, the *favour of God*, while the synonyms of the word are *happiness*, *beatitude*, *bliss*, *joy*. In this case the lexicographer may be trusted and relied upon. I am wholly unable to see how any ingenuity can possibly make out *blessedness* to be anything other than a kind of happiness. If I am right, then, although *blessedness* be, if you please, a principal end of volition and a *good*, yet, since it must be subsumed under a more general good, this latter is *supremum bonum*.

§ 11. In reality both these two designations of the chief good which we have just been considering belong to the same general class as is indicated by those who urge the claims of *virtue* to the position of *summum bonum*. Mr. Sidgwick defines virtue to be 'a disposition to do, or habit of doing, such voluntary actions as are deserving of praise or approbation.' Worthiness of approbation would thus seem to be its characteristic. In its ultimate analysis, virtue reduces itself down to good character with its associations of good reputation. But a good character and a good reputation are pleasures to their possessor, and if these constitute the *summum bonum*, then the latter is still a pleasure, and we are inevitably and unavoidably brought back to happiness. Turn which way we will, we cannot escape from the conclusion that good is pleasure as contradistinguished from pain, and that the chief good is the chief pleasure or the maximum of happiness.

§ 12. If it be conceded that maximum happiness is the *summum bonum*, some question would still remain as to whether it is the maximum happiness of the individual or of others. There does not seem to be any way of avoiding the conclusion that the ultimate appeal must be to the individual consciousness for a judgment of what is good, according as it is good for that individual. *My own feelings are the motives of my actions and* volitions. There must be a pleasurable feeling to me in order that I may pursue any course or plan of action. The thought of it must yield satisfaction to me, and not to anyone else merely. If I make my belly my god, or if I seek sincerely the welfare of my neighbour, in either case there must be some stimulus of pleasure to me in the course adopted. If now pleasurable sensations were the only end to be sought, this would yield us an unmitigated egoism as a principle of action. But an economy of pleasure is requisite, else pain comes all the more overwhelmingly; and it is not the pleasure of the moment, irrespective of consequences, that experience teaches us to pursue, but the greater joy derived from a wise economy of pleasures—in a word, the maximum excess of pleasure over pain, or happiness. And through the social condition, and the social necessities of mankind, it occurs that I do not obtain happiness, except through the happiness of others about me; and, generally speaking, it comes to be observable that the greater the number of other people around me, who are happy, the greater and the more secure is my own happiness. Thus as mankind come into closer relations, and more frequent and more easy communication with each other, the truth, which before seemed limited in its application to the family, the neighbourhood, the party, the state, or the nation, now is seen to have an extension which includes the whole human race. Thus as constituting a part of each individual's happiness, the happiness of others becomes a *bonum*, but does not alter the fact that, in the ultimate analysis, the *summum bonum* to each individual is his own greatest happiness. In speaking, therefore, of the chief good it is well to discriminate between the chief good of the individual and of the nation or race; the former is the maximum of happiness for that individual; the latter is the maximum of happiness for the greatest number. Since ethics concerns the relations of man to man, and implies a social organism, the last named is the *summum bonum* of that science.

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[1] *Lectures on Moral Science*, pp. 57, 58.

[2] Webster's.

§ 13. The question is sometimes asked why we concern ourselves with the welfare of others at all, especially of others quite remote from us. I conceive that there is no answer to be given to such a query more than to state the fact of the social interdependence of men, and the further fact that this interdependence is becoming more and more close and necessary. There is no more reason to be given for it than that life exists, or that the solar system stands. Its existence is on precisely a par with these other scientific truths. If, then, we are asked why we should educate men to find their happiness in the joy of others; to find a pleasure in self-denial and self-sacrifice which overmasters great pain; to esteem it a blessing to die for their country, and while they live to live not for their present selves, but for the benefit of succeeding generations, we can only justify ourselves by replying that such an education tends to promote the greatest happiness of the greatest number, and that it is necessary to the happiness of each one of us that the general happiness be preserved and increased. Thus much for the educators, and it ought to be held a sufficient justification. For the person acting under such an education, it can only be said that to him his maximum of happiness lies in his self-sacrifice. Any inquiry into the final cause of such a disposition, or of the general growth and progress of altruism in the human race must be as irrelevant and fruitless as an inquiry into the final cause of the revolutions of the heavenly bodies.

§ 14. The interest we take in future ages and future generations is in the same category, though at first sight it might seem to be more inexplicable. What has posterity done for us? was the argument of Sir Boyle Roche. Posterity does nothing for us, but it does a great deal for and most intimately concerns our children and our children's children; and the happiness of our children is directly related to our own; and even if an individual has no children and does not expect to have, his labour for the posterity of someone else brings him the approbation and favour of his associates. But even if it does not bring such a reward, it is likely to at some future time, and the hope of enduring fame is one of the chief elements in the present happiness of many people.

All we can do is to watch the development of natural tendencies, and see whither they point. *That* they are so, and the manner in which they came to be so, are within our ken. *Why* they are so,[1] and what their ultimate results will be, we cannot tell. 'Therefore he affirms' (says Cicero, of Torquatus) 'that there is no need of argument or of discussion as to why pleasure is to be sought for or pain to be avoided. This, he thinks, a matter of sense, just as much as that fire is hot, snow white, honey sweet; none of which propositions, he thinks, require to be confirmed by laboriously sought reasons, but that it is sufficient merely to state them.'[1]

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[1] Final cause.

§ 15. Enough has been said, I trust, to show that maximum happiness includes all that there is in the idea of a *summum bonum*, when we essay to find the latter by observation and generalisation. There is no more far-reaching, no wider generalisation to be made; this embraces and contains all which can possibly enter into the notion of a chief good. To those, however, who claim that observation and generalisation have nothing to do with the determination of a *summum bonum*, such a result will not be conclusive. Such thinkers can only be met in the field of psychology and general philosophy. If experience is not the sole teacher, if knowledge is not the outcome of experience, and if science is something more or other than generalisations from experience, then these people may be right; but if the contrary is the truth, with that truth our thesis stands established and cannot be weakened or broken down. Such a comprehensive inquiry as the solution of these problems require belongs to a treatise and not to a chapter; it has been entered into in other places, and need not even be outlined. We assumed a position on this point at the outset of the discussion. But it may be useful in this connection to indicate with a little more particularity some of the causes which have led men astray in studying this fundamental question of ethics.

§ 16. The main difficulty seems to have been that singular obtuseness (before noted) to the fact that pleasure does not mean sensual enjoyment, carrying with it the idea of excess and riot. Epicurus, both by his life and his teaching, sought to disabuse men of these false ideas, but they would not be disabused.

The entire Second Book of the 'De Finibus,' which is occupied with a repetition of the Epicurean doctrines, refutes what Epicurus never asserted nor claimed. It proceeds on the supposition that Epicurus meant by pleasure, pleasures of sensation and of the body; and that, too, although the First Book of the same treatise expressly shows that under the term pleasure Epicurus included enjoyments of the mind as well as of the body, and laid greater stress upon the former. Because Epicurus said that there are no enjoyments which are not *derived* from sensation, the assumed opponent insists that he ignored, denied, and despised everything but presentative sensational pleasures, and actually holds up the words of Epicurus upon his death-bed as proof of the inconsistency of his character with his doctrine—those words wherein the philosopher says that he is passing a happy day, though suffering pains so intense that nothing can be added to make them greater —having 'to balance this a joy in my mind which I derive from the recollection of my philosophical principles and discoveries.' To the arguments of Torquatus that Epicurus meant by pleasure something other than sensual delight, Cicero only reiterates that all the world knows what pleasure is, and that if Epicurus gives any different meaning to the term, either Epicurus or the rest of the world is in error; and then sagely proceeds to argue as if Epicurus had yielded his own idea of pleasure to the popular notion, and adopted the latter into his philosophy—to support which theory there is not the smallest evidence, nor for it the slightest warrant, of any kind. But, having made this assumption, the Stoics could easily enough declaim about the greater excellence of honour and virtue, of the superiority of friendship, modesty, temperance over pleasure; of the greater excellence of the lives of Regulus, Virginius, Lycurgus, Solon, Miltiades, Themistocles, or Epaminondas, over that of the man of Lannuvium, Lucius Thorius Balbus; but they seemed to be utterly oblivious to the fact that to Epicurus, honour and virtue, friendship, modesty and temperance, courage and patriotic self-denial, though to him only greater pleasures, were nevertheless entitled to all the praise the Stoics claimed. Their denunciations and reasonings were destitute of force and application. And to crown all this amazing perversity, Cicero sums up the argument against Epicurus by a reference to the fact that 'the whole sum of philosophy is directed to insure living happily'—the very ground principle of Epicureanism—and then rebukes the Epicureans for placing happiness in pleasure, and endeavours to show that devotion to pleasure cannot bring, or insure, or perpetuate, a happiness.[1]

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[1] Itaque negat opus esse ratione, neque disputatione, quam ob rem voluptas expetenda, fugiendus dolor sit. Sentiri hoc putat, ut calere ignem, nivem esse albam, dulce mel; quorum nihil oportere exquisitis rationibus confirmari; tantum satis esse admonere.—*De Finibus*, Bk. I. 9

§ 17. But though the persistence of this singular and inexcusable heresy, even to the present day, spite of all the discussions that have marked and new lights that have illumined the centuries since Cicero wrote, is a matter for wonder, it is not inexplicable. The psychological facts of representation have never until recently been at all clearly understood. It has not been evident, or at least not been well formulated, that our so-called ideal life is a representation of our sensational. It has not been appreciated that, since cognition, feeling, and volition are all but different sides of the same experience, our emotional enjoyments are only representations of our sensational pleasures. Therefore, it has seemed to many that our ideal joys were something different in kind from our sensations, and while the term pleasure had a relevancy to the sensational enjoyments, the thinking mind, having failed to grasp the true relations of ideas to sensations, could not associate the joy of the higher faculties with animal pleasure, and was unwilling to mark the two by the same designation. Instead of an identification they made an opposition, which was part and parcel of an opposition running through their whole philosophy, between the sensational and the ideal, the experiential and the intuitional. They ought to have made an opposition between one pleasure or set of pleasures and another; instead of this, they wrongly opposed all pleasure to something they insisted was different from pleasure, and which they called *joy*, *blessedness*, *complacency*, or *virtuous bliss*.

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[1] Bk. XXVII. et seq.

§ 18. This assumption of a difference in kind between pleasure and blessedness (if you please—I use only one of the designations) has followed the course of the assumed difference in kind between intuitional and experiential knowledge. And as intuitional cognition has been esteemed higher and better, so a joy in things connected with intuition has been regarded as higher, and any kinship with the pleasures of the animal life has been strenuously denied. The intuitional philosophy has, on the whole (and especially so far as its applications to ethics are concerned), derived a support from religious dogmatism, because it has been conceived to be an ally of dogmatic creeds. The Church having expressed in those creeds the most enormous assumptions of fact as divine revelations, and having denied the right to test these claims by the ordinary gauges of human experience, welcomed a philosophy which would throw discredit upon the methods of experience, and which set up sources of knowledge as above and independent of experience. If the argument from design was not conclusive, a philosophy which gave a faculty of seeing the existence of God by the mind's eye, without proof and without need of proof, was a great gain. And since question and doubt and proof had a disintegrating effect upon religious institutions which rested upon the truth of dogmas handed down from generation to generation, and which were alleged to have been received from the vicegerents of Jehovah, a philosophy which seemed to discourage scepticism, and to show the untrustworthiness of the logical powers of the human mind, and the results of their exercise, was too precious a possession to be lightly relinquished. I am not insensible to the fact that at some times the experiential philosophy has been the bulwark of religion and the intuitional the breeder of infidelity; but such has not been the general course; and the tenacity with which men have clung to church institutions and special formulas of belief furnishes, through the associations I have adverted to, some explanation of the readiness with which they have lent their ears to anything to the damage of the Epicurean doctrine, and the resoluteness with which they have closed them to any explanations or elucidations which tended to make it seem more creditable.

§ 19. Among the religious and theological obstacles which have been in the way of a true appreciation of the greatest happiness principle, there appears quite prominently the free-will doctrine. The prevalence of this wide-spread error was owing to its close connection with theological postulates respecting responsibility for sin, and was able to maintain its hold so long as psychological knowledge remained imperfect. But so soon as a close study of the facts of mental growth and action showed the dependence of volition upon motives, which motives were found wholly within the domain of the feelings, and that the will followed the direction of the strongest motives, people were better able and more ready to see that the free-will principle involved an actual absurdity—no less an absurdity than the denial of the law of universal causation.

§ 20. Another very potent reason for the distrust with which Epicureanism has been regarded, lies in what is called our consciousness that we do many actions without thinking of our happiness at all, or even moved by other and opposed considerations; that we follow after many things for what they are in themselves, and not for the pleasure or happiness they will bring. This difficulty, like the preceding ones, has sprung from an imperfect psychology. It was inevitable in a state of ignorance as to the laws of mental operations; but when we have gained a knowledge of those laws it vanishes without leaving a wrack behind. We have only to learn the laws of redintegration, which are veritiable from the general experience of mankind, to see precisely how that consciousness comes to exist. Associations of contiguous and similar experiences by repetition grow more and more inseparable, until they are so connected that the links by which they were originally joined drop out, and one of the associated ideas recalls the other invariably and immediately. A habit of doing things in a particular manner, or of doing particular things, when once established causes us to perform the actions without any thought of their purpose, although the habit itself grew out of some ascertained or expected utility. The action becomes automatic and in itself pleasurable. Having done the act many times, it is habitual and we love to do it for its own sake. But it is not my intention now to do more than refer to the psychological facts, a knowledge of which removes the difficulty I have just spoken of without attempting a full exposition of them or a demonstration of the validity of the conclusions drawn from them. It is true that we take pleasure in actions or things for their own sake without consciously having any other end in view; but still it is *pleasure* that is taken; and that pleasure comes by repeated action from presentative pleasures as opposed to pains, and its growth in representativeness is distinctly traceable to utilities either in the happiness of the individual or of others. It only remains to be said that the influence of inherited mental constitutions supplies all that is needed to account for thoughts and chains of thought, feelings and actions, which the individual's own associations do not seem to be able to explain. The facts of heredity furnish the concluding and consummating links in the chain of demonstration which substantiates the truth of the experience philosophy.

§ 21. Let it further be noticed that the cry has been raised against the maximum-happiness principle that it excludes all disinterested action, and is wholly inconsistent with it. And here also a more thorough and correct psychological analysis reveals the baselessness of the objection. From the primary pleasures of society and sexuality forming appetites as basic and original as the appetites for air, drink, and food, spring the desires for the amicable presence of other human beings, and which for their satisfaction demand the happiness of those others as a constituent of one's own happiness. If, therefore, the appetite of sexuality is not fully gratified without the pleasure of both parties, and the appetite for the society of others requires for *its* satisfaction that those others shall be happy in your presence (else they will flee from it and society cease to be), and if by the force of habitual action extending through the life of the individual and making an inseparableness of association and reaching back in the line of its inheritance through countless generations, acquiring new strength and power with each repetition, if there comes a spontaneousness of disinterested action and a joy in its exercise for itself, which does not seek for satisfaction beyond; then the existence of altruistic acts and ends is fully accounted for, and seems to be a part of the greatest happiness philosophy, and included within and under its principles. It makes me happy to have others happy; to forget myself is a part of my pleasure, and upon that altruistic pleasure of the Ego depends not only the happiness but the existence of the whole human race. Therefore, so far are the maximum-happiness laws from excluding altruism, that the latter forms one of the most important elements of the greatest happiness, both of the individual and of the race, and is certainly recognised by those laws as indispensable to such happiness.

§ 22. Valuable as have been Mr. Sidgwick's contributions to ethics, it seems to me that in his exposition of its methods he has failed to make a sufficiently profound analysis of the psychological phenomena of feeling and volition, and thus to comprehend the full force of the philosophy of hedonism, and especially of what he terms egoistic hedonism. In discussing pleasure and desire [1] Mr. Sidgwick appears to misapprehend the meaning of the truth enunciated by Mr. Mill, that 'desiring a thing and finding it pleasant are, in the strictness of language, two modes of naming the same psychological fact.' He goes on to say: 'Now if by "pleasant" we mean that which influences choice exercises a certain attractive force on the will, it is not a psychological truth, but a tautological assertion to say that we desire what is pleasant —or even that we desire a thing in proportion as it appears pleasant. But if we take "pleasure" to mean "agreeable sensation," it then becomes a really debateable question whether our active impulses are always consciously directed towards the attainment of agreeable (or the avoidance of disagreeable) sensations as their end.' And the latter is what the author in question understands Mr. Mill to mean. With all due respect to Mr. Sidgwick I am compelled to believe that Mill meant the former; but whether he did or not, the former statement seems to me to express essentially the truth of the matter; and the fact that it is tautological does not militate against its truth or its importance. We have a certain mental phenomenon before us; looked at on one side it is feeling, on the other it is volition. The feeling influences or moves the volition; the volition is moved by the feeling. Now if we are asked to describe the feeling beyond stating that it is feeling, we can only characterise it in terms of volition; it is an *agreeable feeling* we say; that is (we explain) it is a feeling which attracts volition or desire. Reciprocally, we must describe a volitional state in terms of feeling; we *desire* a thing, that is, we are moved toward an agreeable feeling. Of course, desire and pleasure are not the same thing, for to make up desire there is an element of pain needed; we do not desire what we have; it is the absence of something represented as pleasurable which creates the desire. But given an experience not present, to say that it is pleasant means precisely the same thing as to say that it is desired. It would not be correct to say that a thing which is pleasurable is desirable, unless we make a qualification; for the term *desirable* carries with it an implication more extensive than the other word, meaning oftentimes desirable on the whole as compared with other objects of desire; what ought to be, not what *is*, desired. Whatever is pleasurable is an object of desire—would more nearly express the truth.

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[1] *Methods of Ethics*, Bk. I. Chap. IV.

§ 23. Perhaps the whole subject can be made more plain by analysis of the ideas marked by the name *pleasure*, a word with which Mr. Sidgwick also seems to have difficulty. It cannot properly be said that *pleasure* means '*agreeable sensation*,' nor is that a fair statement of the best hedonistic views. *Pleasure* is an abstract, whose concrete concept is *agreeable experience*—not sensation. Now an agreeable experience includes not merely sensation but all feeling, emotion as well as sensation; it includes not only the presentative but the representative in all its varieties, integrations and complexity. This change from Mr. Sidgwick's explanation will be found to make quite a difference with the philosophy of the subject. It should be said, however, that elsewhere in his discussions of egoism Mr. Sidgwick defines pleasure as 'feeling that is preferable or desirable'[1]—a definition to which little exception can be taken, but which is much more comprehensive than the one previously given.

§ 24. And now, bearing in mind that *pleasure* is itself but an abstract, which is derived from and for its meaning carries the mind back to the concrete, it should be evident that this name and the notion marked by it arise from the intellectual operations of reflection, which take place for intellectual purposes rather than volitional. For the sake of classification, comparison, condensation and simplification of knowledge this abstract notion is formed, but the volitional activities do not keep pace with the intellectual, but rather aim at real concrete things as objects of desire. The mind does not desire *pleasure* as such, but rather *things* which are pleasurable. But, as has been before remarked, in another sense volition is inseparably connected with cognition; feeling, volition, and cognition are three different sides of one experience; we mark, identify, and gauge our feelings and volitions by means of our cognitions. In experiencing a pleasure, the pleasure is ascertained and made definite by the cognition. What then do we cognise? We cognise primarily things *non-me*, things outside of ourselves; and as we represent the experience, we represent the objects of cognition in the position of prominence they originally occupied. So that what we desire is things definitely cognised, and those things are in the first place objects outside of ourselves. And since we do not desire everything that comes into experience but avoid some things, the motive to desire or avoidance is the pleasurable or painful feeling connected with the experience. Those things which have pleasure connected with them in our experience, we seek. The *object* of desire is a cognition; the *end* of desire is a pleasurable feeling. In other words, the object of action is intellectual, the end or final motive is feeling. The child desires its mother's breast; the breast is the object of desire, the feeling of hunger is a motive, and the represented satisfaction of assuaged hunger is the final motive or end. That which is desired is objective, else it would not be desired at all; the satisfaction of the desire is subjective. It is a law of our nature that action is directed from the centre outward; and volition flows toward a cognised *object*: but this flow is hastened or checked by subjective pleasure or pain. Moreover, since the objects of action are primarily and at all times in large part *non-ego*, external things form a large part of the objects of desire, volition, and action. And when action or volition is directed toward subjective things, it is necessary to *objectify* them. They become in the mind's contemplation *objects* external to the subjective mind. As such they are objects of desire as well as of other operations of volition. Thus, when I eat an apple there is a subjective pleasurable feeling. The experience altogether is the apple and the actions of the eating and the feeling accompanying. When I recall the experience I think of the apple and the actions I performed in eating it. And as I mentally reproduce them the accompanying pleasurable feeling is reproduced also in some degree, and stimulates me to again realise what I have represented. I then say I desire an apple. But it is possible for me to form an idea or cognition of this pleasurable feeling and abstract it from the cognition of the apple, or to direct the attention toward that cognition chiefly instead of toward the apple and the actions of eating. Should I do this the experience is not reproduced as it occurred, but a modification is made; feeling does not start and begin to fill quite the same channels as before. We have in such a case not the pleasure of eating the apple represented, but the pleasure accompanying a new intellectual object, which is at best only a part of the original object; we have the pleasure which attends the cognition of the pleasure of eating the apple—a dilution of the original pleasure. If we were to make this cognition of the pleasure of eating the apple the object of desire, we should have a vastly weaker pleasure than if we made the apple as represented the object of desire. Practically, therefore, we desire and seek for the most part non-ego objects rather than subjective experiences objectified, though pleasurable feeling is still the motive of the desire.

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[1] Bk. II. Chap. III., opening sentence.

The result of this line of thought is to substantiate Mr. Sidgwick's expressed views that men do not always consciously seek pleasure or the production of agreeable sensations or feelings within themselves, but that there is 'everywhere in consciousness extra-regarding impulse directed towards something which is not pleasure.' Indeed we may even go farther, in maintaining that men scarcely can be said to seek *pleasure* at all. But it also appears there was not in the author's mind clearly the true meaning of the somewhat loose experience that we always desire or seek for pleasure. And while it is patent that we desire objects external, which are not pleasures, it is by no means shown that we desire any objects which are not in some degree pleasurable. On the contrary, it is made more evident that pleasurable feelings are the motives and ends of actions, although not the direct objects of volitions. Cognitions do not move the will; to do that is the province of feeling, and pleasurable feelings draw action and volition toward those objects which produce them, while painful feelings similarly repress and repel. So that the Epicurean philosophy is not disturbed by the considerations Mr. Sidgwick adduces upon this point. It is after all only the old misapprehension of the Stoics repeated, and comes as did their error from an imperfect psychological analysis.

§ 25. It remains for us now to note some of the relations of the *summum bonum* to ends and dispositions. As a matter of fact we may say in general terms that the majority of men do seek their own happiness as their supreme good; and yet this statement needs to be explained, else it will confuse. This statement is our generalisation of what men do; they do not themselves seek happiness directly and distinctly: they seek more specific and particular things which are hedonistic or synedonistic. In other words, they do not make *happiness* an end so much as the doing or acquiring certain things which have an eudæmonistic tendency. We see, therefore, that the *summum bonum* cannot be said to be generally the supreme end of a person; it may not even be a superior end, nor even an end at all. The desires may not be once directed to it; it may not consciously be in the thought; that it should be there requires no inconsiderable amount of education, and involves much reflection and generalisation. It is the more special ends that engross the attention of mankind, though they are all related to and may be connected with the *summum bonum*. The latter is the highest generalisation of what may become ends; practically, what are actually ends are more specific. The *summum bonum* ascertained furnishes us a gauge by which to estimate the value of these specific ends, and to determine whether dispositions toward them should be encouraged or discouraged.

§ 26. When we come to consider whether the *summum bonum* should be inculcated as a principal or supreme end, there are at least two important things to be noted. The first is the difficulty in practically having any end which can be said to be supremely self-sufficient and engrossing; the second is what has been aptly called 'The Fundamental Paradox of Hedonism.' As to the first the remarks just made in the last paragraph are pertinent. Men as a rule are occupied very much more with the particular than the general. Though they generalise and form general rules and purposes and maintain general end., they are constantly being diverted from these to particular ends, and becoming controlled by the latter. Though these particular ends be intermediate to some more general and superior ends, they are more frequently and more continuously in the mind than are the others, and come to be, therefore, in themselves sufficient ends and no longer intermediate. It requires a vast amount of enthusiasm for ideals to enable a person to sustain as a superior end a very general notion with its accompanying feelings. Much more is this the case with a supreme end. Wealth is often said to be a man's supreme end —all-absorbing and all-engrossing; but it is the pursuit rather than the possession which engrosses his attention, and it is the acquisition of this and that particular thing, as a house, a mine, a manufacturing establishment, or a railroad, which he desires prominently. He has the ideal of wealth in his mind, but it is not that which inspires him so much as the nearer and more intermediate ends. This is abundantly proven by the fact before adverted to, that self-sufficient ends are all the time passing into the class of intermediate. Nevertheless it is practicable for a person to dwell upon a very general notion, and create from that a superior end, which shapes his efforts; and while he employs means to that end, these intermediate ends do not cause him to lose sight of the higher end, but are kept in perfect subordination to it. But I question very much whether any men have ever had any one definite end, which for a very considerable portion of life could be considered as a one supreme end, before all others engrossing and absorbing their attention and desire, unless it be the acquisition of some particular, special pleasure, like the gaining of a crown or office, or the quest of something lost, or the fruition of some scheme of business or adventure. When we look at a man's life after it is concluded, and see how by a progress from one point to another, he arrives at a remarkable eminence, we are apt rashly to conclude that to attain what he at last reached was the supreme controlling end of his life; whereas it is more frequently the case that his ends revived from time to time, and were developed as circumstances arose, which made the attainment of a given end seem practicable. It is not to be supposed that Whittington, when at the sound of Bow bells he had his boyish dream of becoming Lord Mayor of London, afterward held in his mind the attainment of that position as a supreme end, or indeed cherished it as an engrossing end, until as he rose step by step that eminence at length appeared to him as within his grasp. Indeed, it is the general experience that men of power and ambition, who entertain in early years hopes of great place, as manhood comes and they are thrown out into active life, and realise its competitions, give up their fond dreams and form their ends according to their circumstances, modifying them as those circumstances alter, amplifying them or raising them as opportunities enlarge.

§ 27. If, however, it is possible to form principal ends which will control action, and to make one end more engrossing than another, it is important to know what ends ought to be made of the greater consequence, and whether any one end should be held as worthy to be supreme. And if to the individual the *summum bonum* is his highest happiness and to the race it is the maximum happiness of the greatest number, it would seem as if these should be the supreme ends. But it is evident that whatever is accepted as the chief good, anything which tends to secure it should be appropriated, and anything tending in an opposite direction should be avoided. If, now, it should appear that to gain happiness for one's self, egoistic happiness must not be held up as an end of effort, and if to so hold it up is the surest way to defeat the object of acquiring it, then, doubtless this *summum bonum* should not be made a principal, much less the supreme end of the individual's action. This supposition is in accordance with fact, and this constitutes the fundamental paradox of Hedonism. And yet it is not so paradoxical as it would seem to be at first sight. For the social constitution and condition of mankind not only make it possible, but render it inevitable, that men shall find their own happiness in the happiness of others about them. The continuance of the race cannot be secured unless human beings associate together; and they will not associate together unless they find pleasure in each other's society; but they *do* associate, and they *do* naturally delight in gregariousness to a greater or less degree. Therefore, one of the means of securing egoistic happiness is altruism. Holding up to one's self egoistic happiness as a principal end, concentrates the attention upon self, and reduces the flow of benefits which comes from disinterestedness, or rather from interest in others' welfare, thus cutting off the supply coming from one great source of happiness. If such an end is kept before the mind as an ideal, the dispositions of the will are drawn toward it, intermediate ends range themselves under it, and the special objects of desire relate directly to self and selfish enjoyment. The virtues tend to disappear and the vices to increase. Charity faileth, and coldness, malevolence and cruelty take its place.

Reacting upon the individual, this ensures toward him a like treatment to that which he visits upon others. The predatory impulses are revived, and society tends to fall asunder to the detriment of each one. But by altruistic dispositions and conduct the prosperity and happiness of each individual is increased and made more secure through the prosperous and happy condition of all. Thus, proceeding from the fact of the existence in man naturally of the primary, original pleasure of society creating an appetite for the presence and companionship of his fellows, as necessary and as irresistible as the appetite for food or sleep, it appears that to cherish as a supreme end toward which the dispositions are consciously directed, that ideal which, when realised, is the individual's *summum bonum*, is to prevent such a realisation and defeat its own object. From the same fact it does not equally follow that to seek as an end the highest happiness of the greatest number or the chief good of the race is always the surest way to secure the individual's chief good. It does appear, however, that to hold up as a principal end the happiness of *some* others is a most certain means to the individual of attaining his *summum bonum*. How wide the circle of altruistic regards should be for the individual's happiness must be determined by circumstances.

§ 28. But maintaining as a principal end the highest happiness of the greatest number may throw an individual out of the pale of the sympathies of his immediate neighbours, and may bring upon him obloquy, persecution, and perhaps death, whereas a subserviency to the demands of his fellows near by may bring to him honour and prosperity, although the wants of his constituency are directly opposed to the maximum felicity of the maximum number. If, however, by inheritance or education he has so strong an altruistic constitution as to cherish the highest altruistic ideals before all others, to work for the happiness of the greatest number may be to him his own greatest joy, and, beside this work and this joy, he will esteem as nothing perils and hardships, and calamities. 'Yea, doubtless, and I count all things but loss for the excellency of the knowledge of Christ Jesus, my Lord; for whom I have suffered the loss of all things and do count them but dung that I may win Christ.'[1] In the spirit and enthusiasm of Paul, a man may devote himself to the realisation of the most general altruistic purposes, and find therein his own most complete satisfaction. Objectively considered, this may not secure to a person his own individual *summum bonum*; subjectively regarded, however, it does so in such a case. And to establish such a state or habit of mind that the individual is happy only in devoting himself to the highest altruistic ends is, for the interest of the race generally. The general ethical *summum bonum* is the maximum happiness of the greatest number; that such a good be realised is the greatest desideratum for human kind. Therefore in the education of individuals it is proper to inculcate as a principal end of volition and action the greatest happiness of the greatest number. Each man *ought* to make it a principal end; for the obligation indicated by the word *ought* arises from the social condition of mankind, and has no meaning except with reference to a man's connection with other sentient beings than the Ego. A person ought to do this or that because the interests of others require that he should, and the ultimate reason for the force of this imperative is his subjective pleasure of society; demanding the presence, comfort, and help of his fellows. If then a person ought with respect to other sentient beings to make the ideal of highest general happiness a principal end, and can be made to take his greatest pleasure in doing what he ought, he has followed the best means to achieve his individual *summum bonum*. As the world progresses and the spirit of altruism becomes more far reaching and pervasive, this coincidence of the ethical *summum bonum* with the egoistic *summum bonum* grows more complete. While this coincidence is incomplete, however, it will not always be true that the happiness of the Ego is best reached by seeking the happiness of the many as an end, though it will be true that egoistic happiness will be secured best by aiming at the happiness of *some* others than self, and not by aiming principally at one's own happiness. Yet the interest of the many will unyieldingly demand that the highest happiness of the greatest number be cherished and favoured as a chief end by each individual, and this interest of society will always create an ethical imperative to follow this chief end, whose influence never can be wholly null upon any one, but which will be increasingly felt. The nearer any individual can come to making the ethical *summum bonum* his supreme end, the more fully will he satisfy the requirements of this social obligation.

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[1] Paul to the Philippians, iii. 8.

§ 29. If a person have no very general ends at all, but is governed by more particular ones, nevertheless his particular ends will be determined for him by his circumstances, and his course so shaped by his environment as to make his life perhaps as happy as if he selected general ideal ends and consciously followed them. He drifts with the current and its onward flow carries him forward, and the stream constantly presents ends for him to direct his attention toward, though he may not know what will succeed them or whither they will take him. This is the situation of a very large fraction of mankind; they live from hand to mouth, from day to day, and know not what will become of them; but nature provides for and takes care of them, seeing to it that they do not fail to get a share of happiness. Sometimes they are happier indeed than many of those who seek to pilot their lives by general ideals, and whose aims are grander, more intelligent, and seemingly more worthy.

§ 30. In conclusion, therefore, let it be observed that in the light of psychological facts, brought out by the most accurate observation and made more evident by a rigid analysis of mental phenomena, the Epicurean doctrines, amplified in some directions and limited in others to be sure, but still substantially unimpaired, furnish us with the key to the problems connected with the *summum bonum*; and that, despite misunderstanding and obloquy heaped upon it, theirs is, after all, in the words of Balzac characterising the teachings of Francis Rabelais, 'that good philosophy, to which we shall always be obliged to return.'

CHAPTER LXX.

SENTIMENTS.

§ 1. AT a very early point in this work, we had occasion to notice States of Consciousness as wholes. We then found them to be the units of mental phenomena, each one embracing feeling, volition and cognition as its three elements, or rather as its three different aspects. The impossibility of separating these three constituents from each other in actual experience, and the fact that any one of them always involves the others, makes it necessary to regard the whole state of consciousness as the limit rather than the feeling, volition, or cognition which belong to it. The processes of growth, and development of states of consciousness, have been set forth in another place. We have now, after having given in addition an exposition of the respective products of cognition, feeling, and volition, to consider the products of states of consciousness themselves taken as wholes, and see what their relations are to the products of elements of states of consciousness regarded separately.

§ 2. Of course, the great division of mental phenomena into presentative and representative applies to states of consciousness, and since mental life is only a succession of states of consciousness, presentative and representative, the only product of a state of consciousness or of states, is some other state of consciousness. And as the products of volitions are but representative volitions, the products of feeling but representative feelings, and the products of cognition but representative cognitions, so the process of states of consciousness gives us as products only representative states of consciousness.

§ 3. These representative states of consciousness which are the ultimately integrated products may properly be denominated *Sentiments*. And in explanation of what that term signifies, I shall quote from Mr. Spencer.[1]

> 'That remoteness from sensations and appetites and from the ideas of such sensations and appetites, which is the common trait of the feelings we call sentiments, is a remoteness implied by the fact that they are neither presentative states nor representations of such states, but consist of the multitudinous representations of such representations confusedly massed with one another and with kindred feelings still more vague, organically associated by ancestral experience.
>
> 'The nature of a sentiment as distinguished from a feeling of an inferior order will be best seen on considering the marked contrast between that sentiment which grows up between the sexes and that simple instinct with which it is connected. The two are capable of existing quite apart; and while the elements of the instinct are necessarily presentative or representative, or both, the elements of the sentiment are almost wholly re-representative. Though presentation or representation of another person is needful to imitate the sentiment and to re-excite it when it recurs in consciousness, yet the sentiment itself is quite separate from the exciting presentation or representation. The body of the sentiment, consisting of that part which is due to inherited nervous organisation, admits of no analysis by introspection; its components have not been put together within the experiences of the individual. But there is a part of the sentiment giving some form to this

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[1] *Principles of Psychology*, Part VIII. Chap. VI.

vague body of it which obviously consists of representations of certain agreeable feelings that have on successive occasions been caused by the presence and actions of the person exciting the feeling. Appearance, movements, manner, voice, expression of face, etc., severally suggestive of pleasurable past relations with human beings, become recollections repeatedly dwelt on in connection with a particular human being, and by association fused into an aggregate of pleasurable recollections; and as this aggregate grows by accumulation, it becomes vague in proportion as it becomes massive. The more multitudinous the component recollections, the less possible is it to bring them severally into distinct consciousness; and yet the more voluminous is the consciousness which union of them produces. And on observing how the individually-experienced feelings are thus compounded into an incipient sentiment, it will be readily seen how there has been evolved the inherited sentiment which forms the still vaguer part of the total emotion.'

To this description not much needs to be added. The body of a sentiment may be characterised as feeling; feeling seems to be the groundwork, the raw material so to speak, of all states of consciousness. And connected and intermingled with these representative feelings which form the mass of a sentiment lie associated and agglomerated cognitions, trains of cognition, associations and lines of association, volitions and habits of volition. And all in various degrees of representation.

§ 4. So far as cognition is concerned in sentiments, it is manifested most characteristically in closely cemented, or inseparable associations. These are the fruit of repetition and concentration in the individual's experience, and of heredity in his constitution. As a sentiment is formed, there grow with it the inseparable associations appropriate to its character. And by these associations the common and ordinarily occurring experience is judged. Identifications are made according to those associations, and the associations of the sentiment are continually drawing into the mass other congruous and harmonising associations, according to the law of similarity. The whole course of thought as life goes on is ruled by the sentiments; the consciousness is occupied by them, and repugnant thoughts and lines of thought are repelled and excluded.

§ 5. In a similar manner volitional dispositions are controlled by the sentiments. The presence of the feeling and associated cognitions evokes volitional action, in accordance with such feeling and such cognitions. Volition occurs directly and peremptorily in the directions indicated by the associated cognitions, and to which they are stimulated by the aggregated mass of feeling constituting the sentiment. Habits of volition and action follow close upon the habits of feeling and cognition, which sentiments imply. Motives brought to bear in opposition to those contained in some well-established sentiment have little power, and are overborne by the strength of the mass of aggregated feeling, unless some sentiment of equal power is invoked to offset and balance.

§ 6. There is no need of amplifying upon the process of the formation of sentiments. The natural history of the growth of associated feelings and cognitions shows it; and in our study heretofore we have exhibited that growth in considerable detail, as well as the results of that growth in the products of cognition, feeling, and volition examined separately. Take a sentiment and analyse it, and we shall find associated cognitions, pleasures and pains, and dispositions toward ends. We have only to make a synthesis of the products of the three factors of states of consciousness as we have been examining them, and our exposition of sentiments is sufficiently complete.

§ 7. The distinguishing characters of cognitions have little application to sentiments, except in the matter of representativeness, and the classification on that score is not peculiar to cognitions. Sentiments have more prominent reference to feelings and volitions. Inasmuch as in the notion of a sentiment there is a combination of feeling and volition, the feeling prompting action in some direction either to seek or avoid, in grouping sentiments a classification according to characters common to feeling and volition will naturally be the most appropriate and the most useful. Since in a sentiment we make a synthesis of feeling and volition, if there be any divisions to be made of sentiments which will preserve this synthesis and yet have relation as well to the component elements, they will best serve the purposes of a classification of sentiments. Of course, whatever the divisions, they must be broadly marked, for nothing is more indefinite than a state of consciousness.

§ 8. The division of pleasures on the one hand, and of ends and dispositions on the other, into egoistic and altruistic, furnishes us with one such division for sentiments as will satisfy the requirements of which I have spoken. It marks two grand divisions of human feeling and consequent action, the one, that pleasure which grows out of direct self-regard and those actions looking toward self-conservation, the other, that pleasure which grows out of the happiness of others, and those actions directed toward race conservation. The one class is prevailingly Egoistic, the other prevailingly Altruistic; between them is the combined class of Ego-altruistic sentiments and Altru-egoistic sentiments. The Egoistic spring from the pleasures of alimentation and bodily integrity as their great centre; the Altruistic from the pleasures of society and sexuality in a similarly important degree.

§ 9. Connected with this division, but not coincident with it, is a division of sentiments into Sympathetic and Antipathetic. The preservation of the individual demands dispositions to compete with, oppose, and even destroy others, giving rise to antipathy and hostility; the preservation of the race requires a disposition to enter into the feelings of others, and to make the pleasures and pains of others the pleasures and pains of self, causing the growth of sympathies, the former disposition being characteristically egoistic, the latter characteristically altruistic. And yet, in the progress of evolution the growth of sympathies necessitates the growth of antipathies as well. A bond of union between two or a few correspondingly occasions oppositions and hostilities toward the rest. A person's sympathies for his wife, his family, his town, his state, carry with them some degree of antipathetic feelings toward other men, other families, other towns, other states. And the stronger his sympathies for those selected as the objects of benevolent regard, the greater his readiness to entertain malevolent sentiments toward those he deems inimical to those objects. So that the exercise of sympathetic sentiments in one direction outside of the limit seems to strengthen antipathetic sentiments. And those antipathetic sentiments are as much entitled to be called altruistic as are their correlative sympathetic sentiments, since they are the products and exponents of altruistic regards. In the exercise of pure altruism with reference to his child, a man may strike down and kill a fellow mortal. From this it appears that, though there is a general relation between the altruistic and the sympathetic and the egoistic and the antipathetic, the two members of each pair do not cover the same ground. There may be altruistic-sympathetic sentiments and altruistic-antipathetic sentiments. Equally is it true that there may be egoistic-sympathetic and egoistic-antipathetic sentiments, as will readily appear upon reflection similar to that just expressed. And inasmuch as so large a portion of human actions relate to others either sympathetically or antipathetically, a division of sentiments accordingly is fully warranted. The individual's social life is made up of sympathies and antipathies which govern his conduct.

§ 10. In classifying sentiments in the manner just set forth, we can scarcely make the two classes inclusive of all sentiments. For there are some that are neither sympathetic nor antipathetic; the aesthetic sentiments are illustrations. With them there is no feeling of sympathy or antipathy which characterises the sentiment, although at the same time there may be sympathies or antipathies relating to some of the objects concerned in the intellectual contemplation. There is then a class of Neutral sentiments, as regards sympathy and antipathy, which should be taken account of in making an exhaustive classification on this basis. And a similar class of Indifferent sentiments should be reckoned as midway between the egoistic and the altruistic. The aesthetic sentiments are of such a character as to scarcely belong to either of these two grand divisions, and there may be others which are not readily to be allied either with the egoistic or the altruistic, or their compounds.

§ 11. Although the foregoing classifications present the most prominent groups of sentiments, it is only so far as they relate primarily to feeling and volition; and although, as has been said, classifications according to the cognitive elements in sentiments are in the main less valuable, yet it is in common and frequent use to designate sentiments by the prevailing objects of cognition to which they relate. Objects about which ends of effort centre themselves distinguish as well the sentiments clustering around them, the products of many states of consciousness in which these objects are prominent. Thus we have domestic sentiments, or those relating to *home*, political sentiments, or those relating to the *political organisation*, patriotic sentiments, or those relating to *native country*. Likewise we have sentiments relating to a course of activity or action characterised accordingly, as commercial sentiments, war sentiments, peace sentiments, educational sentiments, or religious sentiments. All of such sentiments may be egoistic or altruistic, sympathetic or antipathetic; the designation relates simply to the intellectual object which seems to control the volitional activities. There are sentiments of course concerning all of the activities of life and all its conditions, states and relations.

§ 12. In view especially of these facts last remarked, another division of sentiments will be found of importance, namely a division into sentiments whose dispositions relate primarily to one's own actions, and sentiments whose dispositions relate primarily to the actions of others. The former class embraces all those sentiments which contain dispositions having reference to one's own movements and ends. And according as those movements and ends are egoistic and altruistic, so the sentiments are egoistic and altruistic. Then, also, following the grand classification of ends according to the degrees of pleasures and pains, we shall have Sentiments whose dispositions are toward Primary pleasures as Ends, Sentiments whose dispositions are toward Secondary pleasures as Ends, and Sentiments whose dispositions are toward Tertiary pleasures as Ends. Again subdividing, there occur under the first head, Sentiments whose dispositions are toward Organic Integrity, toward Repose, toward Alimentary pleasures, toward Social pleasures, etc.; under the second head, Sentiments whose dispositions are toward Clothing, or Food, or Temperance, or Occupation, or Security, or Aggression, etc.; under the third head Sentiments whose dispositions are toward Knowlege, or Wealth, or Power, or Social Order, Spirituality, etc. There will be implied also in each case dispositions against the opposites of these pleasures. Thus the mind is carried back to the fundamental divisions of pleasures and pains toward the first, and away from the second of which move the dispositions lying in all sentiments. The ultimate constituents of sentiments are thus pointed out, and traces of them kept, and the unification of feeling, volition and cognition in sentiment made more evident.

§ 13. Sentiments whose dispositions relate to the actions of others embrace a large part of the sentiments arising from the social state. I say a large part, but not all, because the individual's dispositions to his individual ends are more or less directly affected by his social surroundings. This grand division includes three chief subdivisions: Sentiments relating to moral conduct, (relating to what ought to be the conduct of individuals toward each other), Sentiments relating to the government of the Family, and Political Sentiments, or those relating to positive authority on the part of men over each other, including the constitution of the state, the making and enforcement of laws, and the general administration of government. Of course, all the sentiments of this grand division may be either egoistic or altruistic; and it is further to be noticed that the characterisation of sentiments as sympathetic or antipathetic applies very pertinently here; for the sentiments we entertain with respect to any specific moral or political conduct are characteristically sympathetic or the reverse. We approve or condemn, favour or oppose, facilitate or obstruct, wish well to, or wish ill, strive for, or seek to defeat, prevent or destroy.

§ 14. It must be borne in mind that not all ethical sentiments are found in the second of the grand divisions just made. For ethical sentiments relate not only to the conduct of others, but also to the conduct of self. Turning back to the subject of ethical emotions in a former part of this work, we shall find a division of that class of feelings which is very apposite here—a division including first those ethical emotions excited by other people's acts and states of consciousness, and secondly those excited with reference to one's own. As applied in the present connection we shall see those ethical sentiments wherein the ethical emotions are of the first of these two classes belonging to the second of the two grand divisions, and the rest to the first.

§ 15. Aesthetic sentiments may occur in either of the two grand divisions. Fulfilment of the aesthetic conditions may be found in emotions whose end is one's own conduct as well as in emotions creating volitions respecting the conduct of others; and whenever the aesthetic conditions are fulfilled, there are sentiments fairly entitled to be styled aesthetic.

§ 16. Below is a tabular statement of the divisions of sentiments of which I have been giving the exposition, which statement will subserve the purposes of a summing-up of this chapter. These highly complex and representative products of mental operations are born in us, are continually being formed and integrated within our minds, and are transmitted to our posterity. All reasoning is directed toward and is process in their formation, and in them reasoning terminates. When once formed they control and survey human conduct irresistibly; they determine the intellectual associations, they fix the emotions, determine the pleasures and pains, and consequently the ends and dispositions. They are not products of intellectual operations alone, nor of feeling nor of volition alone, but of all combined—in a word, they are properly the products of states of consciousness.

I. Sentiments whose Dispositions relate primarily to one's own actions.

- A. *Sentiments whose Dispositions are toward Primary Pleasures as Ends.*
  - 1. Toward Bodily Integrity.
  - 2. „ Light and Heat.
  - 3. „ Respiration, etc.
- B. *Sentiments whose Dispositions are toward Secondary Pleasures as Ends.*
  - 1. Toward Clothing, Weapons, Fires, Bread, etc.
  - 2. „ Defence, Temperance, Riding, Walking, etc.
  - 3. „ Toward Freedom of Movement, Occupation, Security, etc.
- C. *Sentiments whose Dispositions are toward Tertiary Pleasures as Ends.*
  - 1. Toward Life.
  - 2. „ Wealth.
  - 3. „ Knowledge.
  - 4. „ Power, etc.

II. Sentiments whose Dispositions relate primarily to the actions of others.

- A. Sentiments relating to the Moral Conduct of individuals toward each other.
- B. Sentiments relating to the government of the Family.
- C. Political Sentiments.

Sentiments of either of these grand divisions may be egoistic, altruistic, or indifferent as respects egoism and altruism. Sentiments of either may be sympathetic or antipathetic, or neutral. Sentiments of either may be aesthetic.

CHAPTER LXXI.

CHARACTER.

§ 1. THE consideration of the products of States of Consciousness is not complete without some further reference to Character, though a full treatment of that subject belongs to Ethology—a special science. A man's character is the sum of his sentiments, and his prevailing character the sum of his prevailing sentiments. This implies that a person's character is determined by his lines of association, and especially his inseparable associations, by his paramount pleasures and his prevailing dispositions, and his supreme and superior ends. But the synthesis of all these in sentiments enables us to study the proximate constituents of character coherently as they lie in the mind without the necessity of at first going back to the formative elements.

§ 2. Regarding character, then, as proximately dependent on sentiments, its analysis is much simpler, and by that analysis, too, the mind is carried back to the original elements to any extent desired. For after resting at sentiments, we are guided on to pleasures and pains, ends and dispositions, and associations, and thence to feelings, volitions, and cognitions, and the processes by which they grow and are formed, and thence back to the primal facts of consciousness, or farther, to the basic facts of life, organisation, motion, and force. The grand progressus of evolution is followed back to its earliest beginnings, and the connections of its various stages are plainly noted.

§ 3. The term character implies society. It means the marking, distinguishing features of the mental life of men as they are as compared with other men. If there were only one man, the term character would be irrelevant; he would have no character. And since man is in society his character includes, of course, reference to his own actions and also reference to the actions of those about him. Thus, in estimating character, we must take account of the sentiments whose dispositions relate to the actions of self and the sentiments whose dispositions relate to the actions of others, and those sentiments, as has been reiterated, may be egoistic or altruistic, sympathetic or antipathetic; and, following the subdivisions of sentiments, we must also consider the sentiments whose dispositions are toward primary, secondary, and tertiary pleasures, as well as the sentiments regarding moral conduct of individuals, regarding the family and the state.

§ 4. In order then to get a complete qualitative account of the constituents of character in all its varieties, we have only to exhibit a complete chart or map of sentiments, with their varieties of dispositions, pleasures, and associations. Having spread out before us all the varieties of associations, of pleasures and pains, and of dispositions, and having given all the actual combinations of these in sentiments, we have a complete chart of human character as it is; and having given all possible combinations, we have before us all the possibilities of human character. No further analysis and no further synthesis is necessary.

§ 5. But in this combination and recombination of associations, pleasures and dispositions into sentiments, we must consider not only the qualitative but also the quantitative variations. And this presents one of the chief difficulties in the way of a science of character. Our measurements of quantity must be of the roughest kind; for who can gauge the subtleties of thought, feeling, and volition? We can only indicate in a very general way the comparative quantities of feeling, association, and disposition which enter into a given sentiment, and which exist relatively in similar sentiments in different people. But, so far as we can estimate and measure these quantities, so far our science approaches exactness, and to perfect such measurements, and to devise methods of measure and of comparative valuation in point of quantity, is a very worthy employment for the student of character.

§ 6. In this light we shall see how to deal with the empirical designations of character with which we so often meet. If a character is spoken of as affectionate we shall know that it is a character in which sentiments prevail containing dispositions having their root in the pleasures of society and sexuality, and in proportion as we find out toward what the affection is directed we shall be able to note whether primary, secondary, or tertiary developments of those pleasures are chiefly constituent of the sentiments in point. If a character is described as cruel we shall refer to it sentiments in which dispositions toward the predatory pleasures prevail. If it is esteemed just, we shall regard it as embracing prevailing sentiments containing ends of moral conduct. If it is called truth-loving, we shall see in the composing sentiments pleasures of knowledge as ends or pleasures of social favour; or again, sympathies with just conduct as between man and man, leading back, of course, to the pleasures of society as their source. If it is described as avaricious, sentiments containing dispositions toward wealth as an end, or toward gold or silver themselves, are indicated. If it is called lethargic, the pleasures of repose are suggested. If it is termed patriotic, sentiments relating to ends of social order and prosperity come forward. In fine, we are thus able, having given a chart of pleasures and pains, dispositions and associations synthesised in sentiments, to scientifically locate all varieties of character that may present themselves, and without such a map we have no thorough understanding of character in anywise, and no scientific method of estimating parcular and special phases of character. I can conceive of no possible science of ethology which is not based on a study of sentiments and their elements.

§ 7. Manifesting the determination of what character will be under given circumstances is the determination of what a person's sentiments will be under those circumstances; and that is nothing more than ascertaining what, under such circumstances, will be that person's associations and dispositions toward ends. We must learn what causes produce certain effects, and what effects follow from certain causes. Heredity, parental, or pedagogical education, climate, prosperity or adversity, social surroundings, each and all as producing and fostering particular lines of association, ends, and dispositions, have to be studied and the due weight of each ascertained. Compositions of causes and intermixtures of effects must be looked for; induction and deduction must be resorted to, and a constant reference made to experience for verification. No other method obtains here than is necessary and proper for the determination of effects in the material world. In the former case the difficulties may be greater owing to the greater complexity of causes, but still we have left us only the same method for dealing with the phenomena presented.

§ 8. To come to a conclusion as to what character ought to be it is necessary for us to investigate the comparative values of ends and dispositions. The path in this direction has been pointed out in another chapter, and all has been said upon it that seems required by the scope of this work.

PART X.

THE DISINTEGRATION AND DISSOLUTION OF STATES OF CONSCIOUSNESS.

'*Soc.* I may affirm also that the breathless calm and stillness and the like are wasting and impairing, and wind and storm preserving; and the palmary argument of all, which I strongly urge, is the golden chain in Homer, by which he means the Sun, thus indicating that while the sun and the heavens go round, all things divine and human are, and are preserved; but if the sun were to be arrested in his course, then all things would be destroyed, and, as the saying is, Chaos would come again.'—Plato, *Theætetus.* Jowett's trans.

CHAPTER LXXII.

DIFFERENTIATION.

§ 1. Up to this point we have been occupied in following the course of evolution of states of consciousness, not, indeed, unmindful of the fact that evolution necessitates dissolution, but setting aside the latter till we could first exhaust the work of the former. Having now accomplished this last, it behoves us to turn our attention to the complementary processes of dissolution and disintegration.

§ 2. States of consciousness are integers, and the science of states of consciousness deals with integrations. The course of evolution is the course of the development of integrations in their multiformity. When a state of consciousness is disintegrated and dissolved it disappears and is gone, whither we know not. Consciousness lives only in the succeeding states. Hence we have no products of dissolution and disintegration to deal with, and thus our inquiry is considerably abridged.

§ 3. In the normal course of mental action states of consciousness are disintegrated and dissolved by the combined action of the factors of development—namely, organised inheritances, environment, automatic activity, conscious and unconscious. This whole process of development, so far as the change element goes, is differentiation. Evolution proceeds by alternate differentiation and integration. The laws of this differentiation we have fully investigated. The point to be noted here is that evolution requires for its progress in the individual mental development some degree of dissolution and disintegration; and such is differentiation.

§ 4. Under the title of this chapter, therefore, we have nothing further to consider. We have found that each departure of a state of consciousness has been followed by the arrival of others, each differentiation by a redintegration, according to laws which we have found and expressed. What we want to know is, are there changes which are not followed by new redintegrations, and is there dissolution and disintegration which is not in furtherance of, but in opposition to, evolution? The answer and the explanation will be given in the following chapters.

CHAPTER LXXIII.

INTERRUPTED OR SUSPENDED CONSCIOUSNESS.

§ 1. CONSCIOUSNESS in a living organism sustains normal interruptions or suspensions at periodic intervals, and may abnormally sustain such interruptions even for long periods. Sleep is the characteristic normal suspension, and swooning, anæsthesia and coma are abnormal.

§ 2. So far as there is consciousness in sleep, we have already considered the subject in the chapter on Abnormal Development (Chap. XLVII.), but we did not there pay much attention to the state of sleep itself. This is a biological state, promoting the nutrition of the organs by a decrease of the vital activity and processes of oxidation that go on within the organism. It is characterised by muscular relaxation, obtusion of the senses, diminution of the respiratory movements, decrease in the number of heart beats, lowering of the bodily temperature, and a state of insensibility to pain in direct proportion to the intensity of the sleep. The functional activity of the brain, both in the reception of impressions, their co-ordination, and in efferent transmission, is very greatly lowered. This occurs by reason of the diminished supply of blood sent to the brain. 'In the experimental inquiries of A. Durham, made by removing (under chloroform) a portion of the skull of a dog, so as to expose the cortical layer of the cerebrum, it was observed that as the effects of the chloroform passed off and the animal sank into a natural sleep, the surface of the brain, which had previously been turgid with blood and inclined to rise into the opening through the bone, became pale and sank below the level. On the animal being roused after a time, a blush seemed to start over the surface of the brain, which again rose into the opening through the bone. And as the animal was more and more excited, the brain surface became more and more turgid with blood, numerous vessels which were invisible during the sleep being now conspicuous, and those before visible being greatly distended. After a short time the animal was fed; and when it again sank into repose, these vessels contracted again and the surface of the brain became pale as before. (Guy's Hospital Reports, 1860.) (b.) Similar results have followed like experiments by Dr. W. A. Hammond of New York. (c.) Dr. J. Hughlings Jackson having examined by means of the ophthalmoscope the condition of the retina during profound sleep, found it paler and its arteries more contracted than in the waking state. (Royal London Ophthalmic Hospital Reports.)'[1]

§ 3. Sleep is a type of all suspensions of consciousness. They all arise from some interference with the normal vital functions which affects the functional activity of the brain, causing either anæmia or hyperæmia. When the interference is removed and the normal functional activity restored, consciousness returns.

§ 4. An important fact to be noted with regard to the loss of consciousness, when it is interrupted in the ways named, is that it is gradual and progressive. Of course unconsciousness may supervene instantly upon a blow; but, as in falling asleep, or in the approach of anæsthetic insensibility, there is first a deadening of one function and then another. I quote the result of Mr. Spencer's examination of a record of experiences under chloroform, the account of which, with Mr. Spencer's comments, is found in Mind No. XII., and which I have once referred to before (Chap. XLVII. § 35).

> 'Concerning this account it may be remarked, on the one hand, that the higher consciousness seems not to have been wholly abolished; since there remained certain emotions and certain most general ideas of relation to objective agents. On the other hand it is to be doubted whether the partial consciousness which the narrator had during anæsthesia, is not, in the description, eked out in some measure by the ideas of his recovered consciousness carried back to them. Be this as it may, however, it is clear that certain components of consciousness disappeared and others became extremely vague, while a remainder continued tolerably distinct. And there is much significance in the relations among them:— 1. There ceased earliest the sensations derived from the special senses; then the impression of force acting on the body from without; and, simultaneously, there ceased the consciousness of external space-relations. 2. There remained a vague sense of relative position within the body; which, gradually fading, left at last only a sense of those space-relations

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[1] Found in Dr. Carpenter's *Mental Physiology*, Chap. XV., with comments by Dr. Carpenter, q. v.

implied by consciousness of the heart's pulsations. 3. And this cluster of related sensations produced by the heart's action, finally constituted the only remaining distinct portion of the Ego. 4. In the returning consciousness we note first a sense of pressure *somewhere*: there was no consciousness of space-relations within the body. 5. The consciousness of this was not a cognition proper. In an accompanying letter my correspondent says of it:—" 'Recognition' seems to imply installation in some previously-formed concept (talking in the Kantian way), and this is just what was *not* the case": that is, consciousness was reduced to a state in which there was not that classing of states which constitutes thought. 6. The pain into which the pressure was transformed was similarly universal instead of local. 7. When the pain became localised its position in space was vague: it was "up on the right." 8. Concerning the apparition of "the girl," which, as my correspondent remarks, seems to have occurred somewhat out of the probable order, he says in a letter:—"I did not recognise her 'under any concept'—what I saw seemed to be almost unassisted intuition in the Kantian sense." 9. The localisation of the pain was at first the least possible—the consciousness was of that part *versus* all other parts unlocalised.

'These experiences furnish remarkable verifications of certain doctrines set forth in the "Principles of Psychology." This degradation of consciousness by chloroform, abolishing first the higher faculties, and descending gradually to the lowest, may be considered as reversing that ascending genesis of consciousness which has taken place in the course of evolution; and the stages of descent may be taken as showing, in opposite order, the stages of ascent. It is significant, therefore, that impressions from the special senses, ceasing early, leave behind, as the last impression derived from without, the sense of outer force conceived as opposed by inner resistance; for this we saw to be the primordial element of consciousness. (§ 347.) Again, the fact that the consciousness of external space disappeared simultaneously with the consciousness of external force, answers to the conclusion drawn that space-ideas are built out of experiences of resistant positions, the relations among which are measured by sensations of muscular effort. (§§ 343, 348.) Further there is meaning in the fact that a vague sense of relative position within the body survived; since we concluded that by mutual exploration there is gained that knowledge of the relations among the parts of the body, which gives measures through which the developed knowledge of surrounding space is reached. (§§ 344, 345.) Once more we get evidence that the Ego admits of being progressively shorn of its higher components, until, finally, the sensations produced by the beating of the heart remain alone to constitute the conscious self: showing in the first place, that the conscious self at any moment is really compounded of all the states of consciousness, presentative and representative, then existing (§ 219), and showing, in the second place, that it admits of being simplified so far as to lose most of the elements composing the consciousness of corporeal existence. Whence it is inferable that self-consciousness begins as a mere rudiment consisting of present sensations, without past or future. Lastly, we have the striking testimony that there exists a form of consciousness lower than that which the lowest kind of thought shows us. The simplest intellectual act implies the knowing something as such or such—implies the consciousness of it as like something previously experienced, or, otherwise, as belonging to a certain class of experiences. But we here get evidence of a stage so low that a received impression remains in consciousness unclassed: there is a passive reception of it, and an absence of the activity required to know it as such or such.'

§ 5. Consciousness, in its interruptions, seems to be governed by organic vitality. So long as life proceeds onward in its regular course so long consciousness moves on in parallel course; when vital forces are interfered with consciousness is correspondingly affected. We are therefore brought to consider death in order to find circumstances of the more complete disintegration and dissolution of states of consciousness.

CHAPTER LXXIV.

DEATH.

§ 1. THE death of the vital organism is that equilibration which initiates disintegration and dissolution. (See Chaps. XVII. §§ 23, 24; XX. §§ 37, 63; XXII. § 28.) As old age comes on the mental capacities are more or less affected. 'The brain, like every other organ of the body, suffers a diminution of power, of activity, with the advance of age; it is less supple, its ideas, like the movements which it dictates, being performed slowly and stiffly; it reacts to impressions with less and less vigour and vivacity, and there is less and less capacity to assimilate the influence of them, so that there ensue dulness of perception and an incorrect appreciation of events. Meanwhile, however, the past is a possession which is incorporated into the organic nature of the brain, and may be sufficiently remembered, though perhaps with less vivacity than formerly, when the latest impressions have been obliterated by 'decay's effacing finger.' . . . The old man and the child both fail in judgment; the former, because he has forgotten more or less of the past, and has lost the standard by which to measure the present perception, or because he cannot perform accurately the present perception. . . . By the necessity of the case almost the old man becomes conservative and the *laudator temporis acti*; for the evolution of events goes on when his nature has ceased to assimilate and develop; he has accordingly no sympathy with them, shrinks from contact with them, and grievously brands as revolutionary what is truly evolutionary. It were a grievous thing if old men did not die, for in that sad case the world's movement onward to where it is going would be very sluggish if it were not actually arrested.'[1]

§ 2. It thus appears with reference to old age (and the same things might be observed with respect to disease) that as the forces of evolution lose power, as the vital activities are impeded and vital action diminished, so also there is a deterioration of mental powers, especially in the directions above-named. But still consciousness is present in all its forms, though it may be diseased, or its faculties weakened from their previous or normal condition. Nearly or quite up to the point of death there is consciousness, and the consciousness which indicates the preservation of past experiences—not all, to be sure, but in the main. The organised sentiments and character are still there, and the mind does not return to the condition of infancy. Thus to the end a person's prevailing organised sentiments remain, and are not disintegrated nor dissolved, though new acquisitions are prevented and memory is treacherous.

§ 3. Now, when death occurs, to the outside world there cease all indications of consciousness, and we have nothing in the way of evidence of what has become of the conscious mind with which we were familiar. We know what becomes of the body; we can trace its disintegration and dissolution, but we can trace no further disintegration nor dissolution of consciousness. Make what supposition we will, we have not one scintilla of evidence on which to base it. All we can say is that we have no knowledge or experience of mind save in correspondence with a living organism. This is the end of our knowledge, therefore, with respect to the disintegration and dissolution of states of consciousness.

§ 4. Further science saith not; further philosophy saith not, except it may be the self-styled philosophy of some of those who feign a knowledge where they have none by making 'a noise with sounds, without clear and distinct significations.'[1]

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[1] Maudsley, *Phys. of Mind*, Chap. IX.

Waking one morning,
In a pleasant land,
By a river flowing
Over golden sand:—

Whence flow ye, waters,
O'er your golden sand?
We come flowing
From the Silent Land.

Whither flow ye, waters,
O'er your golden sand?
We go flowing
To the Silent Land.

And what is this fair realm?
A grain of golden sand
In the great darkness
Of the Silent Land.'[2]

CHAPTER LXXV.

THE CONNECTION OF MIND AND BODY.

§ 1. THE final question of psychology now appears before us. It is indeed properly a problem of philosophy, since its solution demands a synthesis of both the facts and principles of the material world and those of the mental sphere. But though this be the case, we cannot be excused from at least considering the subject in outline in this place.

§ 2. We have seen that consciousness, throughout its whole extent, maintains the fundamental antithesis of Ego and Non-Ego with which we started out in the beginning. Nothing has broken the force or abated the universality and necessity of the Law of the Subject Ego and the Law of the Subject Non-Ego, which we found at the portals of our science (Chapter XI.).

§ 3. Nevertheless, there has been a remarkable correspondence and parallelism which we have noticed as existing between material and mental phenomena. To begin with, our General Analysis of External Things (Chapter XIII.) gave Relativity,

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[1] See Chap. LVII., conclusion.

[2] James Thomson.

Consistency, Extension (Statical Resistance and Motion), Presentativity (Relativity to Mind), and Force. Our General Analysis of States of Consciousness (Chapter IX.) gave Difference, Agreement, Time (Duration and Succession), Representation (Relativity to Matter and Mind), and Power. The correspondence here is exact. Again, we observe a perfect correspondence running all the way along between life and mind, and see that in all mental development the law of evolution governs in precisely the same manner as in vital development. All our laws of mental development are subordinate laws of evolution. And all our states of consciousness are apparently affected by states of the proximate or more remote environment. Moreover, the influence of heredity, a most powerful factor of development, arises through a physical organic germ. Matter thus seems somehow to act upon mind, and mind to react upon matter.

§ 4. We may at once narrow our inquiry down to a consideration of the relations between states of consciousness and the nervous system, assuming the latter to be a product of material evolution and dependent upon the vital forces. Wherever there is a state of consciousness, there are correspondent motions in the nerve-substance; and as states of consciousness vary, so nervous motions vary, each state having some correspondent motion or set of motions. Two questions then immediately present themselves: (1) Does a nerve-motion cause a state of consciousness? and (2) Do states of consciousness ever cause nerve motions?

§ 5. With respect to the first question, it may at least be said that a nerve-motion begins at the periphery, and is transmitted to the centre at a measurable rate of velocity before any sensation appears. At the centre certain resistances to the afferent nerve-motion occur, and various actions and reactions in the central mass, whose course we are not able to trace and which we cannot measure. In the midst of these consciousness arises. Now in order to say with certainty that the nerve-motions caused the sensation we ought to be able to show that some portion of the force evoked by those nervous actions and reactions has ceased to appear as nervous force, and has become a sensation. This is precisely what we are unable to determine. We do not know but all this nervous motion of action and reaction expends itself upon the nervous system in its various ramifications. We have no means of measuring or tracing the nervous force under such conditions. We have, therefore, no evidence that any particle of nervous force ceases to exist as such, and that in its place an equivalent amount of sensation is developed. But we do know that before the nerve-motions were stimulated there was no sensation, and that if we withdraw the stimulation the sensation ceases; if we renew it the feeling is renewed also, the sensation varying as the stimulation. Hence, although we cannot make out a quantitative correlation between a nerve-motion and a state of consciousness, we have very strong inductive grounds upon which to affirm a relation of cause and effect.

§ 6. With regard to ento-peripheral feelings the same remarks can be made. We are not able to note the initiation of vital and nervous movements prior to sensation in all cases, but in many cases we are; and in those cases that we can observe there is the same concomitant variation of feeling and nerve-motion, the former being dependent upon some organic stimulation of the latter. It would seem tolerably clear, then, that so far as peripherally-initiated feelings are concerned, it is true that they *are* peripherally-initiated, and that they are caused by nerve-motions, which are in turn caused by material forces.

§ 7. The automatic movements from central sources which we have had occasion frequently to observe, and which we also found among the factors of development, react upon and modify the environment; they also are concerned in the redintegration of consciousness. Now, what nervous movements take place in redintegration, or how they are stimulated, what are their proper antecedents and when they arise, we are wholly unable to say. We do not know whether the state of consciousness arises first and stimulates or sets a-going the nerve-movement, or whether the redintegrating or efferent activity is wholly accounted for by afferent movements and central force liberated. Nor do we have any means of ascertaining these facts. And this, together with the kindred difficulty mentioned in § 5, is the reason why the problem of the connection of mind and body is so hopelessly insoluble. If we could reach these ultimate facts we might not indeed solve the problem, but we should be much farther advanced on the road to solution.

§ 8. In the central nervous system, therefore, we are baffled. Up to a certain point we can objectively trace nerve-movements; at that point our objective knowledge is cut off. Thenceforward we have only the subjective testimony of consciousness; nerve-movements as matter of knowledge cease, and we have *feelings*, cognitions, volitions. Then, on the other side, these express themselves somehow in efferent nerve-movements, then in muscular movements, and so forth.

§ 9. Of what consciousness says, when interrogated introspectively, the foregoing treatise bears witness. The general analysis which we made revealed a consciousness of activity put forth and moving outward. Does it not seem reasonable, therefore, in the present state of our knowledge, to affirm that states of consciousness cause nerve-movements? In other words, to say that matter and mind act and react upon each other?

§ 10. But there is an alternative. As before seen, we have no evidence that any particle of nerve-force is subtracted when consciousness appears; nor have we any evidence that any portion of consciousness is subtracted and added to efferent nerve-force. If, then, all the afferent nerve-force exhausts itself in central reactions, these in their turn, propagating all sorts of movements through their own automatic force, then what we must say is, that at a certain point of nervous action and reaction consciousness appears as a concomitant of nervous motion, varying with the latter, but how connected we cannot understand. In this view nerve-motion cannot be said to cause consciousness nor consciousness to cause nerve motion. Both may be the effect of a common cause.

§ 11. If this last be the correct explanation, what shall we say of the origin and source of consciousness? I think we shall be forced to admit that consciousness is only the flowering of mind, and that below consciousness there is an unconscious mind-substance, out of which consciousness is evolved. In its higher forms this unconscious mind-substance is correlative with nerve-force, and below nerve-force it still exists correlated with other forms of force. Of course we can have no science of this mind-substance except as determined by our science of matter, but we are compelled to admit its existence. There is no point going down the scale of forces where we can dispense with mind-substance, if we expect to account for its appearance in the form of consciousness. Hence, matter everywhere has correlated with its atoms, atoms of mind-substance having laws exactly parallel to and the counterparts of material laws. There is, then, a law of the evolution of mind from mind-substance, until at last consciousness is reached; and when it is reached, the laws of states of consciousness are laws of a continued evolution. We then inherit with our physical organism mind-substance, which is developed in correspondence with the development of nerve-functions into all the phases of conscious life.

§ 12. This view is quite in accord with what we have learned in our study with regard to unconsciousness in its bearings on consciousness. There is undeniably in conscious life an activity working all the time underneath consciousness whose results are continually being brought into consciousness, and by all the laws of consciousness we are forced to postulate a subject-mind below all conscious manifestations. This we are obliged by like warrant to exclude from and put over against a subject Non-Ego. Moreover, consciousness is evidently a growth from the simple, the indefinite, and homogeneous. Indistinct consciousness arose before distinct consciousness. The argument then is, that below consciousness there is mind-substance, still opposed to Non-Ego substance, but still somehow related to it, out of which all varieties of mind are evolved.

§ 13. The doctrine here advanced was put forward among other considerations not necessarily involved in it at all by the late William Kingdon Clifford in an article 'On the Nature of Things-in-themselves' (Mind, No. IX). Though I cannot subscribe to everything he presents in that article, it seems to me that this author has stated a doctrine with respect to unconscious mind which is supported by psychological science, and that the cogency of his remarks on that point has not been impaired by any of the many criticisms which that paper elicited. But the reality of the Non-Ego world is just as necessary as that of the Ego, and we perceive in the world about us not mind-stuff but matter-stuff, and it is impossible to destroy one without destroying the other. I fail to see that Clifford has succeeded in showing the contrary.

§ 14. But though we are compelled to postulate a mind-substance everywhere existing in correspondence or correlation with material substance, our only knowledge of it is through our knowledge of material substance. We have no knowledge of anything save our own consciousness, except mediately through material-substance. We have no knowledge of the existence of other consciousness than our own except inferentially through the material world. I know my own states; I distinguish myself from the things about me; I infer from the Non-Ego the existence of other beings like myself endowed with consciousness; I infer, also, the past history of my consciousness, its growth, its antecedents. I am forced to postulate an unknown subject Ego, and inasmuch as my conscious life is indissolubly connected with corresponding material movements, I infer that my unconscious mental substance must still be allied in corresponding manner with material substance; and in the laws of material substance I read the laws of a mental substance, exactly parallel in all respects, in whose existence I am compelled to believe.

§ 15. Mind and matter, then, may be said to present a double-faced unity. There is no objection to this statement after a caution. I do not think we are warranted in saying that there is to be posited a common substance. Consciousness invariably and inevitably postulates an antithetical and mutually-exclusive Ego-subject and Non-Ego-subject; and outside of consciousness we have no evidence. Consciousness itself is not evidence as to its own substance or the substance of matter. I think we must assume a negative attitude on this point. We do not know, and so far as I can see, never can know whether the substance of matter and mind are one and the same or different.

§ 16. If now the doctrine of concomitance and correspondence, as I have presented it, together with its corollaries be not true, and the other hypothesis be accepted, what is the result? We shall have to concede a so-called transmutation of nerve-force into consciousness and back again. This makes of consciousness a force of precisely the same character as any material force,—in other words, a mode of motion. There is then nothing left but to classify consciousness with material forces, to identify mind with matter. I have already said there is no evidence to favour this supposition of transmutation; and when there is no evidence I, for one, cannot commit the solecism of asserting that which the powers of my own intelligence, the final arbiter in any case, declare to be absolutely unthinkable. The first, the inevitable, the unavoidable postulate of all knowledge, science, and philosophy, is the fundamental antithesis and mutual exclusion of Ego and Non-Ego. This truth is conditional for all thought.

§ 17. Therefore, until science advances farther, and a better explanation can be found or this one shown untrustworthy, I shall adopt the doctrine of concomitance and correspondence as expressing what we should believe with respect to the union of mind and body. As before remarked in another connection (Chap. XXXIV.), it is probably advisable to allow an abridged statement of the facts, and continue to speak of mental states as caused by physical states and the converse. For, below consciousness mind is only expressed to us in material phenomena, and these are the only indicia of mind substance; while on the other hand, in conscious states, the material phenomena corresponding are suppressed, and are only expressed in conscious phenomena. In the former case we are thus led to affirm the physical states as causing the mental, and in the latter case the corresponding suppression compels us to assert that the mental states produce the subsequent effects manifest in material phenomena. It is this curious suppression of the mental in the one case, and of the material in the other, that has undoubtedly led to much misunderstanding as to the relations of mind and matter. But it would be awkward certainly, and probably hopeless, to undertake a reform in this connection. And it being once clearly understood that such a statement of cause and effect *is* only an abridged statement of the facts, there need not be any further confusion. For working purposes the statement is sufficient; for scientific, it is readily susceptible of explanation; possibly it may turn out to be exactly true, after all.

§ 18. I shall not occupy myself nor my readers with any of the thousand and one philosophical and speculative questions which these considerations upon the connection of mind and body suggest. Whole philosophies could readily be evoked from them. With such we have nothing to do. If we have succeeded in our professed endeavour to exhibit the *science* of states of consciousness, the things we know with reasonable certainty about conscious states and their relations, we have indeed laid a foundation for philosophers to work upon; but to them we will leave the field of labour.[1]

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[1] If any critic of this work desires a complete and searching review made of its faults, I can assure him that he will do well to apply to me, for I am certain of more shortcomings than any one who has not made the subject an especial study can possibly observe. I send the book forth very reluctantly, but in the hope that possibly it may aid a little in unifying and systematising psychological knowledge. At least its writing will have proved a benefit to myself in making clearer and more settled my own beliefs. If any reader thinks it worth his while, I shall be greatly obliged if he will send me word of any imperfections he may notice, so that I may have the advantage of such suggestions in case a second edition should seem advisable.

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